IMPLEMENTATION OF THE NATIONAL FIRE PLAN

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON FORESTS AND FOREST HEALTH

OF THE

COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES

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C O N T E N T S

OVERSIGHT HEARING ON THE IMPLEMENTATION OF THE NATIONAL FIRE PLAN

Tuesday, July 31, 2001
U.S. House of Representatives
Subcommittee on Forests and Forest Health
Committee on Resources
Washington, DC

The Subcommittee met, pursuant to notice, at 3:02 p.m., in Room 1334, Longworth House Office Building, Hon. Scott McInnis [Chairman of the Subcommittee] presiding.

STATEMENT OF THE HONORABLE SCOTT McINNIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF COLORADO

Mr. MCINNIS. The Forest and Forest Health Committee will come to order.

First of all, as Chairman, and speaking for the ranking member, we welcome all of our guests. We appreciate, Chief, that you were able to come over here today. I know your time is valuable, but we think that your input is also very significant.

Also, I would like to kind of lay the ground rules for those that are new to the Committee. I intend to make opening remarks. I then will yield to the ranking member for opening remarks. Neither of those remarks are limited by time. However, we then kick into a time limit in order that we can allow all of our panels to have a fair opportunity to have their viewpoint or their input heard. So, in that regard, because, Chief, I understand that Mr. Laverty—and by the way, welcome, Mr. Laverty. I have a long-running, excellent relationship with you—Chief, I am going to allow you 10 minutes for testimony and, Mr. Hartzell, I am going to allow you 10 minutes for testimony. I am going to allow the General Accounting Office 10 minutes for testimony. All other witnesses will be limited to 5 minutes.

And again, also, the members will each be given 5 minutes for their respective opening statements, although traditionally the members submit their opening statements.

So, with that, before I turn it over to Mr. Inslee, who is the ranking member, for opening remarks, I would like to make a few of my own.

The purpose of this hearing today has a couple of significant points. First of all, I think it is very important to listen and to

understand exactly what the General Accounting Office is telling us. We know, those of us who have lived out in the West, and those of you who live elsewhere, but have experienced a forest fire, how quickly they can become a devastating catastrophe. We also know that the potential for these kind of things are only a lightning strike away.

As a result of that, it is incumbent, it is incumbent upon us, as servants of the people, to be prepared to move immediately in an emergency situation to quell the threat or to minimize the threat. It is also incumbent upon us, in my opinion, not to wait for the 911 call, but to do the necessary things, such as coordination of emergency teams, communications between agencies, discussions and implementation of forest fuel cleanup, et cetera, et cetera, prior to the lightning strike occurring.

I am not confident that any of this has taken place to the kind of degree that we need. That said, I do want to compliment the Chief, I want to compliment Lyle, Tim. This is something you have inherited, and you have got to, unfortunately, you are not going to be able to take this at a normal pace. You have got to take this as a high priority, especially in light of the recent tragedy that we experienced in the West.

Let me say that I am trying to figure out, from my viewpoint, what can I do constructively to assist you. When we come to a fire, as many of you know, but for our guests in the audience, out in the West, we have got the U.S. Park Service, we have got U.S. Fish and Wildlife, we have got the U.S. Forest Service, we have got the Bureau of Land Management. We then have private property people, and some of these large ownership tracts have their own fire trucks. We have local Fire Departments, we have State Forest Service Fire Departments. Coordination is absolutely critical because of the mass of people that is necessary to fight one of these fires.

It is amazing, if you have never been to a fire, one of these, to see what we have to set up just for accounting purposes. We have to set up our kitchens that are necessary. We have to set up a clothing store so we can issue uniforms. I mean, we have to set up a miniature city. That does not get done in a time-efficient manner if we do not have the best of coordination and the best of communication.

So my thought was, well, maybe we need a Fire Czar. Maybe we need a czar that is above the agencies, for the purpose of coordination and communication. It is like a computer jam. We need somebody to flow the traffic, to get that through that fiber optic line, so that it is distributed to the necessary parties, so that response to the 911 call can be immediate.

Now, those are my opening remarks in regards to the Committee.

[The prepared statement of Mr. McInnis follows:]

Statement of The Honorable Scott McInnis, Chairman, Subcommittee on Forests and Forest Health

This Subcommittee has spent more time working on the issues surrounding wildland fire than on any other subject. This is appropriate. There is no other federal forest issue that results in more public spending, more damage to forests or more hardship for people. Anyone who has been surprised by the size and severity of forest fires during the last few years has either ignored the issue or has been

in denial, and there is no question that denial ran deep in the previous Administration. Since the late nineteen-eighties, commission after commission, report after report, all called for a dramatic and improved response to this explosive situation. Even in the face of these dire warnings, a business-as-usual approach dominated the previous Administration's behavior for the better part of eight years, until the impacts of their negligence became undeniable and unbearable during last years disastrous fire season.

Fortunately, since then, the issue has been infused with a new vigor in terms of greatly increased funding, and new direction in the form of a National Fire Plan. But the years of negligence have created an institutional momentum that won't be easy to curb. While some aspects of the fire plan are being effectively implemented, others are not. The GAO is going to testify that there are some crucial issues that have yet to be adequately addressed. The timing of their comments could not be better. Since this Administration is still in the process of staffing key positions and establishing new policies, it can use the GAO's remarks to help organize its basic strategies for implementation of the National Fire Plan. This also ties in well with the Administration's current collaborative efforts with the Western Governors" Association to develop a ten year comprehensive strategy.

To help ensure that these efforts move forward in an efficient, coordinated manner, I recently proposed that the position of "Fire Czar," or its equivalent, be created to oversee all federal wildland fire operations. A position such as this would help give the issue the attention, direction and emphasis it deserves, and would be a unifying force between Departments and a catalyst for inter-agency cooperation. These objectives may be accomplished by other means than by the appointment of a "Fire Czar"; what is most important is that the objectives are met.

Even though we have a long road ahead of us, I believe, for the first time, that we have broad understanding and recognition of the problem, a critical mass of support, the financial means and the collective will to begin a decades long battle to protect our nation's forests and adjacent communities from the indiscriminate ravages of catastrophic wildfires. Hopefully, this hearing will help us to continue to move these efforts forward in a positive manner.

Mr. MCINNIS. I have some very disturbing news that I now want to discuss, and, Chief, we are in the process of confirming this right now. So I am not trying to blind-side you, and at this point, it is strictly an allegation, and I would caution everybody in the Committee room, at this point it is strictly an allegation. However, I should note that if, in fact, it moves from the allegation stage to the fact stage, it is verified, it will bring about, in my opinion, serious consequences. And, Chief, I would hope that you would be back here so that we can see this never happens again. And let me tell you exactly what I am talking about.

I received information that has been confirmed through confidential sources, as well, this party claims, has other public sources and has also received confirmation from the Forest Service itself. This regards the fire that took four lives 2 weeks ago. Apparently, according to these allegations, a water drop which was requested in an emergency—an emergency request for a water drop to assist those firefighters was delayed for a minimum of 2 hours due to the Endangered Species Act, and the lack of coordination or communication somewhere up the line, afraid to issue that order in fear of violating the Endangered Species Act without some kind of task force confirmation that, in fact, the helicopter could go in, dip a bucket into the river and take water out of a river that had endangered species.

Let me give you the time line. Again, this is all allegation at this point, but I think we will be able to have verification shortly. Here is the time line that has been given to me:

At 5:30 in the morning, Hotshots have fire contained and ask for helicopter support to douse the fire. Dispatch tells the crew boss in

the field a helicopter will not be available until 10 o'clock that morning, when the pilots arrive.

9:08, the Hotshot crew is replaced by a Type II crew for a "mop-up" of the 30-mile fire. Gee, that is 9:08.

At 10:22 a.m., the Type II crew begins work.

At 12:08, Type II crew calls into dispatch asking about delay of 10 o'clock scheduled helicopter drop. Dispatch tells crew boss in field helicopters it cannot be used because of three species of endangered fish in, I think the Chiwawa River. Bull trout and fingerlings may be scooped up in the helicopter dipper, the bucket that the helicopter uses.

At 1:15 p.m., single-engine tanker drop is requested by crew boss.

At 2 o'clock, fisheries' biologists, fire management supervisor and a forest ranger for the Methow Valley finish a consultation and review and approve an exemption from the pact fish policy that governs forest. Helicopter is permitted to remove water from river.

2:17, helicopter en route.

2:38, helicopter bucket or dipper is being attached.

3 o'clock, approximately, we think one bucket of water, first water was dropped.

At 3:58, the fire exploded.

4:17, air tankers diverted. Thirty Mile Fire too dangerous. Crew runs for safety, deploys survival tents.

5:25, four firefighters pronounced dead.

It appears that there was inaction until 10 o'clock that morning. It appears there may have been a delay from 12 o'clock to 3 o'clock, due to the Endangered Species Act, as far as resources focused on the fire, and it is also possible that there was a delay from 10 o'clock to noon, as far as putting the helicopter out also because of the Endangered Species Act.

As I am sure all of you understand, I am very, very concerned and want to know, and, Chief, you can help us, we need to find out if there was a delay in putting resources on that fire because of the Endangered Species Act. One of the questions that I would like you to address is at what level in the field somebody can make a determination because there is a threat of life to override any of these jurisdictions and put whatever resources are necessary to save those people.

So, with that, I will turn it over to the Ranking Member, Mr. Inslee.

STATEMENT OF THE HONORABLE JAY INSLEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. INSLEE. Thank you, Mr. Chairman. I just have a few brief comments.

First off, I want to express what I am sure something everyone in the country feels, which is a sense of honor of the families who sent their sons and daughters into the paths of danger in these forests. And the reason I say that that is a sense that we share nationally, sometimes we get into arguments about who owns the national forests, who gets to make decisions about national forests:

Should it be the local communities? Should it be the States? Should it be the entire Nation?

I just want to say that I think everyone in the Nation ought to take a moment to tip their hats to the folks who deal with our national forests and frequently put their lives on the line, and the individuals who in very, very difficult situations made decisions in very quick periods under intense heat. And we should be just a little bit slow in the U.S. Congress to be critical of folks in this regard, and I want to tell you why.

When this tragedy happened, one of the immediate thoughts that struck me was that it was very possible that the U.S. Congress would leap to action to use this multiple tragedy to sort of flail at whatever political message they want to drive home. We are the owners or possessors of 435 different messages, and I will resist strenuously the efforts to turn the loss of life and health that these individuals gave into some sort of whipping post to whip up particular positions on ideological issues about anything.

Those who would use this to say the tax cut was wrong because we don't fund the Forest Service adequately, and as a consequence, people die, I don't want to hear those arguments. Those who have ideological predispositions against the Endangered Species Act, let us focus on the facts of this particular incident, rather than our ideological predispositions. I am going to look forward to a rational discussion about the specifics of this incident.

In this regard, I would also suggest we have a couple thoughts, as we go through this evaluation:

One, Chief, I hope that you now understand you sit in a place of constant, ubiquitous and certain criticism. If you had let this fire run totally and it had destroyed Eastern Washington, you would have been soundly criticized. You will be soundly criticized by folks, for a variety of reasons, in regard to this fire. I hope you understand that goes with the nature of the position. It is a tough position to be in. I think you are in it.

Secondly, I hope that people don't mix issues here about decisions in fire suppression. There are decisions that can be driven by trying to preserve the ecosystem. There are decisions that need to be driven by safety of our firefighters. I hope in our discussion we will keep those separate. They are interrelated, but let us make sure that we keep them separate in our mind.

With that, I look forward to your testimony. Thank you very much.

Mr. MCINNIS. Before we begin the testimony, as Chairman of the Committee, let me advise the Committee you are free to discuss anything you want, as far as your policy and your philosophy is in regards to forest fires. I think philosophy has a lot to play with what has occurred out there. I think the fact is that sometimes our priorities get confused. Our purpose here is not to criticize the Forest Service, but it is to make constructive implementation. And certainly as elected representatives of the people out there, we have an inherent responsibility to be sure that what is supposedly going on has some kind of measurability or some type of standard of performance.

This Committee hearing is not being used as some kind of political ploy, and I can assure the ranking member that if the

allegations that I just read are, in fact, move into the factual status, this Committee is a very appropriate place to have those kind of discussions. So I am going to allow the Committee to have that freedom.

We will go through the Committee. Go ahead, Mr. Duncan, you can make an opening remark.

STATEMENT OF THE HONORABLE JOHN J. DUNCAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

Mr. DUNCAN. I would like to make a brief opening statement. Mr. Chairman, thank you very much for holding this hearing.

I sat on this Subcommittee in early 1998, when we heard several experts from the Government and outside the Government who estimated that we had 39 million acres of forest land in the West in imminent or immediate danger of catastrophic forest fires. Then, we received that warning again in another Subcommittee hearing on this same subject in early 2000. Those warnings came true this past summer when some 7 million acres burned, and the damage estimates ran as high as $10 billion.

Now, if I went out and burned 1 tree in one of the national forests, I would be arrested and put in jail. But because of the policies of the past administration, 7 million acres were burned and $10 billion of damage was done because there are extremists who don't want us to touch the national forests. And I am told by staff that some 6 billion board feet of trees die each year, and that—I don't know what the total would be for all of the accumulated dead trees over the years, but we were told by expert after expert that the primary reason that these forest fires get out of control is, is because of all of these billions, and billions, and billions of board feet of dead and dying trees that have accumulated over the past few years on the floor of the forest, and then it causes a fuel buildup, and that is the primary reason that we have these huge forest fires.

And what we have got to realize, at some point, is that we have to have some common-sense management of our national forests or you are going to continue to see huge catastrophic forest fires with more loss of life and more tremendous economic damage in the years ahead. I hope that someday people will realize that you have to cut a few trees to have a healthy forest.

And if the allegations that the Chairman has just talked about, that four people lost their lives because of some concern about the Endangered Species Act, and we couldn't get water to them in time, that is one of the most serious allegations I have ever heard, and it would be just horrible to think that there are actually Members of Congress who are putting endangered species ahead of human life in this country. That, to me, would seem to be just almost criminal, one of the craziest things probably that I have heard since I have been in the Congress.

Thank you very much, Mr. Chairman.

Mr. MCINNIS. Ms. McCollum?

STATEMENT OF THE HONORABLE BETTY McCOLLUM, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Ms. MCCOLLUM. Mr. Chairman, I look forward to this Committee meeting, and the rhetoric is getting pretty hot in here, and I think we need to step back and cool it down, and do it quickly up here.

Mr. MCINNIS. Ms. McCollum, may I interrupt for just a moment?

Ms. MCCOLLUM. Well, no, Mr. Chair—

Mr. MCINNIS. Ms. McCollum, I am the Chairman. I will interrupt.

Ms. MCCOLLUM. I realize that.

Mr. MCINNIS. All I am going to do is ask you to speak into the mike, so we can hear you. Now you may proceed.

Ms. MCCOLLUM. I am a little nervous, Mr. Chair, because I just heard one of the members of this Committee, I have heard both people, this is something that people have very strong opinions about how we manage our forests. And then I have heard the gentleman that just spoke, you know, basically, if I was to say right now this minute that I support some of the things in the Endangered Species Act, and I am sure it was not done with deliberate malice or intent to make me feel this way, I would be put at a level where I would not value human life, and I think we need to lower the rhetoric and go on with the Committee hearing.

I am very interested in representing the State of Minnesota, where we have the Boundary Waters area, and we are very concerned about it, and we are trying to work through the process with the Forest Service.

So, Mr. Chair, I know you will do a great job conducting the hearing, and it will be a good hearing.

Mr. MCINNIS. Thank you. And I might point out that I am confident that no member in here is saying that the Endangered Species Act should take priority over human life. The concern here is at what point do we have the ability on the field to overrule or override some type of policy in existence in regards to endangered species or a road or whether you can use this kind of helicopter or that kind. We experienced it on Storm King Mountain. We experience it in most disasters that we have had in our history. Our obligation is to make this as clean a communication and as clear-cut as we can.

With that, Mr. Hayworth?

Mr. HAYWORTH. Mr. Chairman—

Mr. MCINNIS. Mr. Otter, do you have any remarks? I will go in order.

Let me, Mr. Hayworth, I am sorry. The vice Chairman has just stepped in. As protocol, I should recognize the vice Chairman.

Mr. Peterson, do you have any remarks?

Mr. PETERSON. No, I want to wait until we get into the hearing. Thanks.

Mr. MCINNIS. Mr. Hayworth, my apologies. You may proceed.

STATEMENT OF THE HONORABLE J.D. HAYWORTH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARIZONA

Mr. HAYWORTH. Thank you, Mr. Chairman.

This isn't pleasant. It isn't fun. It is not time for gamesmanship, but it is time for accountability, and we are faced with decisions here that have consequences. And our role in the Congress of the United States is to exercise effective oversight, not only dealing with the mistakes of the past, but how we can correct those mistakes.

Perhaps it is inevitable that politics intersect with policy, but somehow to suggest that anyone would use the tragedy of the death of these four firefighters or anywhere else to try and score debating points I think is very unfortunate. It is captivatingly clever to try to define the field in a political manner and then say, "But we are going to step away from that."

What we do need to focus on is a policy that strikes a balance that leads to clear-cut accountability. And in the words of a candidate who was successful in his pursuit of the presidency in 1992, he entitled his plans for the future, "Putting people first."

So, far from the roar of the greasepaint, and the smell of the crowd and accusations or imagined prepositioning on debate policy, we have a clear mission here today, Mr. Chairman. Something is wrong. We can't bring back those who have perished. We should do more than tip our hats rhetorically. The best tribute we can provide to those families, for whom the solace of words holds little recompense, is to determine an effective, common-sense coordinated policy that puts people first while respecting our environment.

I look forward to the testimony today.

Mr. MCINNIS. Thank you, Mr. Hayworth.

I am going to ask for unanimous consent. Mr. Walden has requested that he sit at the dais. I think you are ready to go. Are you ready? So I would ask for unanimous consent to allow him to sit at the dais. I would ask that we do that. Furthermore, I think he has a couple of posters. The reason that I have asked Mr. Walden to attend, and he has also requested to attend, is obviously his district is a victim of these kind of fires. He has got a massive district in the State of Oregon. I think he is one of the leading experts in the House on fires, forest fuel, et cetera, et cetera, et cetera. So I ask unanimous consent that Mr. Walden be allowed to join us and allowed testimony.

Seeing no objections, so ordered.

Mr. Walden, you may proceed.

STATEMENT OF THE HONORABLE GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. WALDEN. Thank you very much, Mr. Chairman. Indeed, 56 percent of the district I represent in Eastern Oregon is controlled by the Federal Government. It includes 12 of our Nation's forests, 12 national forests in that district. I will have a full statement that I will submit for the record and try and condense my comments here, but I think the photos that we are going to show you speak louder than any words I could give you.

What you will see here is the difference between treated and untreated—fire that has gone through treated and fire that has gone through untreated. The first picture that we will hold up just a little higher here on the left is the Deschutes National Forest,

and it is called the Newbury fire. This is the untreated lodgepole, and ponderosa, and underbrush that existed in that forest. The interesting thing about this fire, which I toured after it was out last summer, is that they are in the process of doing, of treating these stands. And so you have a real opportunity to view firsthand a fire that has gone through both treated and untreated lands on our Federal forests. This is the untreated.

The result to the right, now, if we could hold that one up a little bit higher, is lands like this that were pictured on the left untreated after the fire has gone through. And what the Forest Service folks told me is most of the small, skinny trees there are lodgepole pine. The bigger ones are ponderosa. And in this example, first of all, the soil has been completely destroyed and will be like that for some time to come. The lodgepole pine is very susceptible to fire, and most all of that will have died. And some, if not all, but some, quite a bit of the ponderosa pine trees, which usually are fairly resistant to fire, but when it gets this hot, some of those will die as well.

Now, if we could go to the other set of pictures here, Mr. Chairman. We will first hold up a photo of the treated areas. This is after treatment on the same forest. As you can see, the underbrush has been removed. The smaller trees have been taken out. It has been treated by the Forest Service, part of the treatment program.

Now, let us hold up how that looked after the same fire that went through this area. I think you will see a dramatic difference. Ponderosa pine, while charred, still alive. And they told me that a lot of the lodgepole pine through there would probably survive as well.

The question I ask the Committee is which do you want for your forests? Which do you want? Do you want the charred variety on the right or the one that will sustain an ecosystem and come back to life much sooner? Obviously, we all want the one on the left. And I think that is the key about this hearing, in part, is how do we get more of what is on the left here, in terms of treatment in our national forest, so that we have less of what is on the right with the destruction of our national forests?

Think of it as your backyard. If this was your backyard, which one would you want? How would you proceed? And one of the problems you have is, then when you have a fire that comes through, as we see here on the right, it can take 3 or 4 years to work through the process to get in and do anything to treat those lands, and I can show you the Tower fire in Central Oregon, where that was clearly the case.

There is another example, which I don't have the photo right here right now, but in Wallowa County, extreme Northeastern end of my district, in 1990, the Canal fire devastated 18,000 acres of Federal lands, making the soil acutely hydrophobic. To this very day, a tremendous amount of sediment is washed into nearby streams each time a significant rain event moves through the area. We worry a lot out there and put a lot of money into restoring fish habitat and trying to deal with water quality and quantity. In this case, a fire in an untreated area has resulted in I believe it is upwards of 30 miles of fish habitat that is victim to, and I should

point out that is ash, not snow, that you see there, and that rushes through these streams for many years to come.

So, Mr. Chairman, I appreciate the hearing that you—is that the picture of the Canal fire? Okay. Yes. This will give you an example of what is left. We talk about setbacks from stream sides, but look at what happens here when you get a catastrophic fire. That is your stream now, and it is a mess. And it is why some of us feel so passionately about this issue and about the need to be able to get in and not only improve the forest health, but also, clearly, to be able to have the tools to fight a conflagration when it does start because these aren't the forests of 100 years ago because we have suppressed fire for 100 years. We now have the overgrown forests of today. So, when we do get a fire, people's lives, homes, and the environment are extraordinarily at risk.

So, Mr. Chairman, I appreciate the opportunity to sit on the dais. I appreciate the courtesy of the Committee to do that and your attention to this very, very serious problem facing the West.

[The prepared statement of Mr. Walden follows:]

Statement of The Honorable Greg Walden, a Representative in Congress from the State of Oregon

Thank you Mr. Chairman. I want to thank you for affording me the opportunity to sit on this subcommittee today. I'd also like to commend you for holding this important oversight hearing on the progress of implementing fuel hazard reduction projects prescribed under the National Fire Plan. As a member who represents a district that is nearly 56% federally owned and has all or part of 12 national forests, this is an issue that is vital to both me and the communities that I represent.

Mr. Chairman, from the Wallowa–Whitman and Malheur National Forests in eastern Oregon to the Fremont National Forest in south central Oregon, the 2nd Congressional District is home to 12 national forests, in addition to substantial holdings of state and private forest lands. Unfortunately, Mr. Chairman, due to years of poor land management policy by the federal government, many of the forests in my district have become overcrowded and thus ripe for a cataclysmic blowup similar to those that occurred in Idaho and Montana last year and that we just witnessed last week in Wyoming. I can't emphasize enough how important it is for us to proceed with the fuel reduction projects made possible by the National Fire Plan. Mr. Chairman, I saw firsthand the different ecological effects a fire has on areas of forest that have undergone a mechanical treatment versus those that have not when I took a tour of areas in the Deschutes National Forest affected by the Newberry Fire of August, 2000.

Since pictures speak louder than words, I would like to show the subcommittee some pictures taken of the forest within the Newberry fire area before and after this fire had run its course.

- In the first picture you'll notice an area of the Deschutes National Forest that has become severely overgrown, which is regrettably common in the forests of Eastern Oregon and Eastern Washington. Absent any mechanical treatment, the ponderosa pine, like the picture illustrates, gets choked with young trees, competing species and a lot of dead debris creating a flammable understory that is so shaded that seedlings can't grow. If a fire were to occur, the accumulated fuels could explode into an inferno.
- That's exactly what we see in this second illustration where a fire has raged through this area of the Deschutes killing the ponderosa. The fire has burned so long and hot that it has killed animals and underground roots, and the superheated soil no longer absorbs rain, causing erosion.
- Let's compare that devastation with an area of the Deschutes National Forest that has been mechanically treated. As you can see, due to this treatment a healthy ponderosa pine forest has developed consisting of widely spaced trees and brush. The forest floor contains only modest amounts of dead fuel and wood. If a fire were to travel through this area, it would kill only a few large trees while cleansing the understory of debris.
- And as this final picture illustrates, such a mechanically treated forest can recover from a fire of this type because the fast-paced fire doesn't superheat the soil, thereby letting animals and underground roots survive.

Although maintaining a healthy forest is our primary goal in performing mechanical treatments on our national forests, we can't overlook the ancillary effects that these treatments have on watershed health. My friends in the environmental community often forget how sediment runoff from a devastated area of forest made hydrophobic by a severe burn can affect a nearby watershed. Such a situation exists in Wallowa County, located in the extreme northeast corner of my district. In 1990 the Canal Fire devastated approximately 18,000 acres of forest-land making the soil acutely hydrophobic. To this very day, a tremendous amount of sediment is washed into nearby streams each time a significant rain event moves through the area. This erosion not only delays the successful rehabilitation of the forest, but it has a detrimental effect on the recovery of listed species of fish.

Mr. Chairman, I'd like to close my remarks by briefly commenting on the potential effects that mechanical treatments have for biomass cogeneration not only in my district and throughout my state, but in many other areas of the country as well. Disposing of the biomass that stockpiles on these lands from overcrowded and dying timber stands, timber sales that actually materialize, and thinning projects is not only environmentally sound, but represents a valuable resource if used properly. Converting forest biomass to energy is a beneficial source of renewable energy production—particularly during our national energy crunch. Furthermore, it can provide at least a slight economic boost in many of our struggling rural communities that were once able to rely on consistent employment and revenue from well-managed timber sales. Many of the communities in my district continue to suffer from the decline of timber sales on state and federal lands. Providing incentives for biomass cogeneration through fuel hazard reduction would provide a welcome economic boost to many communities in Oregon, while benefitting the environment by simultaneously reducing the chance of severe wildfires.

Thank you, Mr. Chairman. I yield back the balance of my time.

Mr. MCINNIS. Thank you for joining us, Mr. Walden.

We are now going to move on to our panel. Our first witness on Panel I is the Chief of the Forest Service, Mr. Bosworth, who I think has been on the job for 8 weeks. Coming in on the job in the beginning of the fire season is like taking over command of a ship in combat. You have got a tough deal, and I know that you haven't been on the job very long.

Also, we will have Mr. Hartzell. We are going to ask that you limit your testimony to 10 minutes each which, by the way, is twice what we traditionally allow our witnesses.

Chief, I would appreciate if you would have somebody on your staff, I think it would be beneficial to the entire Committee if you would have somebody send to us written communication that outlines exactly what the command structure is at the scene of a fire that is just on Forest Service property, at the scene of a fire that involves multiple agencies, which would include private property or local municipalities, and I think it will help us understand a little better what happens when you arrive at that scene from the 911 call or whatever call is made, how that all comes together and how a fire community is built to resolve that.

Furthermore, I would appreciate, if you have some comments in regards to the allegations that I have repeated earlier. Also, I want to give you an opportunity, you have seen the comments or have an idea of the comments of the General Accounting Office, I appreciate any response you may have to that.

Clearly, I would like to hear about the implementation of the fire plan. Again, I compliment you. Lyle, I know you are new on the job here. Tell us where we are. Tell us. And I think we should be frank with each other. As the ranking member said, this is what we want to achieve in this Committee. I agree with him.

And then, finally, I know this is a lot of things, but I would like to, maybe a Fire Czar is an idea you can throw up in the air and discuss.

Anyway, Chief, with that in mind, you may proceed. Again, we appreciate you coming today.

STATEMENT OF DALE BOSWORTH, CHIEF, USDA FOREST SERVICE; ACCOMPANIED BY LYLE LAVERTY, USDA FOREST SERVICE

Mr. BOSWORTH. Thank you, Mr. Chairman. Thank you for the opportunity to appear here today. I am looking forward to talking about the National Fire Plan and the implementation of the National Fire Plan.

I am accompanied here today by Lyle Laverty, who is the Associate Deputy Chief, and he is also the National Fire Plan Coordinator for the Forest Service, and also with me is Dr. Robert Lewis, who is the Deputy Chief for Research and Development, and Dr. Kevin Ryan, who is a Project Leader in Fire Effects in our research station in Missoula, Montana. They will testify on fire ecology on one of the other panels. So they will answer questions about the science basis.

I would like to just summarize my testimony and enter the entire piece into the record, if I can.

Let me start first by talking about the Thirty Mile Fire. The Thirty Mile Fire occurred on the Okanogan National Forest. Four young firefighters, as you know, as you have been referring to, their names are Tom Craven, Karen FitzPatrick, Jessica Johnson, and Devin Weaver, lost their lives when they got trapped in a narrow canyon on July 10th. Their deaths occurred even though they deployed their fire shelters. Fortunately, there were 10 other people that deployed their shelters and were saved. And there were two civilians who happened to be in the area that were also saved in a shelter that they shared with one of the firefighters.

Four of the survivors and the two civilians had some injuries. All, but one, of the injured were treated in a local hospital and later released. One of the injured firefighters, Jason Emhoff, received burns over 30 percent of his body, and he is still at the Burn Center at the Harborview Medical Center in Seattle.

Shortly after I heard about the incident, I went out to the Okanogan National Forest, and I met with some of the injured firefighters. I visited with Jason and his family at the Burn Center. I just have to say that I really admire their courage. They are just hugely courageous people, and they are going through some, if I call it recovery, both emotionally and physically.

I, also, met with some of the other firefighters while I was there that were in the burn-over, and once again I was really impressed with the professionalism of these brave men and women that they exhibited while they are exercising their day-to-day work on the fire line. Season after season, they protect the life and property of our country's resources.

When something like this happens, it really impacts people in the Forest Service. And it isn't just the friends and the colleagues in the local offices that get impacted, but it has a huge effect on

everyone in the Forest Service family because everyone cares deeply about these people.

We don't know all of the reasons behind this event. We have an investigation that has been going on now since the fire, and they are working hard at doing a thorough investigation. We have some of the best people in the Forest Service on that investigation team. It will be in-depth, and it will be thorough, and it will be important to us, so that we can help make adjustments, so that we can ensure that we will have, in the future, that we will have even safer situations for our wildland firefighters.

I would like to comment briefly about the helicopter business that you talked about, the bucket. I really don't know the details of that. I haven't heard a whole bunch about that. It will be part of the investigation that will be checked into. I do know that the places where I have worked, we pre-identify locations where you can draw water out of a stream. Before a fire occurs, we have identified where those spots are and have worked with the Fish and Wildlife Service and the National Marine Fisheries Service to try to work those things out before you have a fire.

Normally, if we have an ongoing very difficult fire, then a decision is made, if you need water, you get water where you need to get it, and then you consult later, and that normally is worked out for us. Again, I don't know the circumstances here, but we will check that out, and we will report back to you.

Now I would like to turn to the National Fire Plan.

Mr. MCINNIS. Just a minute, Chief. I don't usually interrupt a witness. But I do want to point out, as you pointed out, one of your firefighters, and for the Committee's information, one of the firefighters deployed their shield, their burn shield—what is the technical name?

Mr. BOSWORTH. Fire shelter.

Mr. MCINNIS. Fire shelter. And pulled in two civilians; isn't this correct? Pulled two civilians into the fire shelter. They are made for one person. Pulled two people in who had no fire shelter, which then, of course, exposed, meant that she wasn't going to have full protection. I think it was a female firefighter.

Mr. BOSWORTH. That is correct.

Mr. MCINNIS. And I think the female firefighter suffered burns as a result, all three of them, but they were all three saved.

Mr. BOSWORTH. That is correct.

Mr. MCINNIS. Boy, you pin a star on her and give her the highest praise—to all of the firefighters—but that took a lot of guts, and I just want the Committee to know about the actions of one particular firefighter that saved the lives of two civilians.

Mr. BOSWORTH. Thank you for adding that.

On the National Fire Plan, for the past century, we have been pretty successful at preventing and suppressing unwanted fire. This work has been accomplished with I think the best intentions, to protect our growing communities, and the valuable forests and the rangeland resources. In some locations, we have had unintended consequences from that success, and that is the buildup of fuels, of excessive amounts of fuels and dense vegetation, which now when we have drought conditions and high winds, they can fuel devastating wildfires.

As we have said before, there is no real short-term solution to this problem. We have to be in it for the long term in order to deal with it. While we continue with our best efforts to protect communities and forest lands from the effects of unwanted fire, we need to focus our attention to treating the hazardous buildup of vegetation that fuels those fires. I think we are at a very important turning point right now. The National Fire Plan really is a beginning of the solution.

About 9 months have passed since the Forest Service, and the Department of Interior, and our State partners undertook a huge task of implementing the National Fire Plan. I believe it is a huge task. It is a monumental task. In that brief time, we have learned a lot of lessons, and I think we all realize that we have many areas where we can improve. We are dedicated to developing processes to expedite collaboration, providing common performance measures and budget planning models, and analyzing and managing interagency landscape-scale projects.

And while I think we recognize that there are some shortcomings, we don't want to lose sight either of the extraordinary achievements that have occurred on the ground in the last 9 months. Today, national forest resources and nearby communities are protected by an optimum level of firefighters and equipment. That wasn't the case 9 months ago. During a recent firefighting readiness review that was held in California, fire managers on the Sequoia National Forest described how the new firefighting assets provided by the National Fire Plan have helped control wildfires in 1 day that historically would have taken 3 to 5 days to control. In Utah, we have spoken with people that have said that without the additional firefighters, many of the fires that occurred there this year would have grown to a much larger size. The list of accomplishments, I believe, is quite long, and Lyle Laverty will answer any questions on the specifics of those accomplishments.

Last week I was out in the West, and I visited the Bitterroot Valley. The Bitterroot Valley was a place where we had, as you know, many fires last summer, lots of fire. I went out there because I wanted to look at mud slides that are occurring now that I had heard about. I flew over in a helicopter and looked down and saw drainage after drainage, where there were gullies that were 5/10-feet deep from one small storm that went through that dropped less than an inch of rain. And this is after putting hundreds of thousands of dollars in to try to prevent those kinds of things from happening. Some of the mud ended up down in some of the houses where the houses had been saved from the fires last summer.

There is lots that goes on when you have that kind of wildfire, and there is huge potential for problems. I went to one drainage, where it has been a bull trout habitat, an endangered species, and we thought maybe that that habitat, about 3 miles of that stream had habitat that we thought might have been saved. But now with the mud down there, the biologists tell me there isn't any chance at all that there is going to be any habitat there for a long time.

I went from there to Jackson Hole, Wyoming, to see the fire that was taking place there just outside of Wilson, Wyoming, and saw the houses that were right in the middle of the dense timber and watched as the firefighters were able to save those homes. I don't

think that could have happened if we hadn't have had the level of firefighting force that we have today. I, also, think that that is a good example of the kind of places where you have to work hard in the wildland-urban interface to thin those places out so that you don't have that high potential for fire.

My staff and I are going to continue to work closely with the Department of Interior team, and the State foresters and the communities to restore and maintain healthy ecosystems and to minimize the losses from future wildfires. We have been hiring and training personnel to improve future fire management capabilities. We are stabilizing and rehabilitating many of the sites that were damaged in the fires of 2000. The reduction of hazardous fuels reflects an expanded scale of action, with extensive planning underway for 2002 and 2003. In cooperation with the States, the list of communities at risk has been revised and will be an important tool to plan future projects.

I think I will conclude my statement at this point, and I would be happy to answer any questions.

[The prepared statement of Mr. Bosworth follows:]

Statement of Dale Bosworth, Chief, Forest Service, U.S. Department of Agriculture

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Thank you for the opportunity to appear before you today to talk about the implementation of the National Fire Plan. I am Dale Bosworth, Chief of the Forest Service. I am accompanied today by Lyle Laverty, Associate Deputy Chief and National Fire Plan Coordinator of the Forest Service. Also with me today is Dr. Robert Lewis, Deputy Chief for Research and Development and Dr. Kevin Ryan, project leader in fire effects research at Missoula, Montana, who will testify on fire ecology in one of the other panels.

Thirty Mile Fire

First I would like to speak briefly about the Thirty Mile Fire on the Okanogan National Forest in Washington State. Four young firefighters, Tom Craven, Karen FitzPatrick, Jessica Johnson, and Devin Weaver, lost their lives when they were trapped in a narrow canyon on the afternoon of July 10. Their deaths occurred despite the fact they deployed fire shelters. Fortunately, 10 other firefighters and two civilians in the area survived.

Four of the survivors and two civilians were injured. All but one of the injured were treated at local hospitals and later released. One firefighter, Jason Emhoff, received burns over 30% of his body and remains in the Burn Center at Harborview Medical Center in Seattle.

I went out to the fire scene after hearing of this tragedy and met with some of the injured firefighters and visited Jason shortly after the accident. I admire their courage as they recover from their physical and emotional injuries. I also met with other firefighters while I was there and was once again impressed with the professionalism these brave men and women exhibit while dedicating themselves to the fireline—season after season—protecting life, property, and our country's natural resources.

When something like this happens it really impacts the Forest Service. Not just the friends and colleagues in local offices who suffer a tremendous emotional blow but everyone in the Forest Service family cares deeply and is affected.

As of July 30, the Thirty Mile Fire burned 9300 acres and is 100% contained. Mop-up and monitoring is expected to continue throughout the summer. The fire burned in dense lodgepole pine, sub-alpine and Douglas fir stands that are 80 to 100 years old. Fires in this vegetation type during dry years burn with intense heat and are extremely difficult to suppress once they become large. When first attacked, and for several hours afterwards, the fire was not perceived as dangerous. It became dangerous suddenly with a change in conditions.

We still do not know all the reasons behind this horrible event. The investigation is not complete. We want the investigation to be in-depth and thorough because it is important for the future safety of our wildland firefighters that we learn all we

can from this tragedy. When the investigation is complete, we would be happy to brief you on the results.

National Fire Plan

I would like to now turn to the National Fire Plan. The severe fire season of 2000 captured the attention of the American people on the need to find ways to protect life and property and minimize losses of natural resources. On September 8, 2000, the Secretary of Agriculture and the Secretary of the Interior issued a report entitled "Managing the Impact of Wildfires on Communities and the Environment." The report, referred to as the National Fire Plan, contains recommendations to reduce the impacts of wildland fires on rural communities, reduce the long-term threat from catastrophic fires, and ensure sufficient firefighting resources in the future.

For the past century we have been very successful at preventing and suppressing unwanted fire. This work was accomplished with the best intentions to protect our growing communities and valuable forest and rangeland resources. In some locations an unintended consequence of this success, however, was the buildup of excessive amounts of dense vegetation, that now, in times of drought and wind, fuels devastating wildfires. These uncharacteristically intense fires threaten homes, communities, watersheds, wildlife habitat, and the lives of firefighters and the public. Each year, more vegetation grows and the problem becomes incrementally worse. There is no short-term solution to this problem. Now, more than ever, we must continue to prevent and suppress unwanted fires and reduce these unnatural fuel conditions. They have the potential to be more destructive to communities and the environment than ever before.

While we continue with our best efforts to protect communities and forestlands from the effects of unwanted fire, we must focus our attention to treating the hazardous buildup of vegetation that fuels these fires. An aggressive fuel treatment program is the only long-term solution if we are to reduce the effects of unwanted wildland fire, restore our forests to ecologically health conditions, and protect our communities on a longer term basis. As we continue to find common ground and work in partnership with other federal agencies, states, tribes, counties, local communities, and Congress, we leverage our resources and skills, increasing our ability to solve this national problem. We are at a turning point. The National Fire Plan is the beginning of the solution.

Less than nine months have passed since the Forest Service, Department of Interior, and our State partners undertook the giant task of implementing the National Fire Plan. It is a monumental task. In that brief time, we've learned many lessons, and we realize we have many areas in which we can improve. We are dedicated to developing processes to expedite collaboration, providing common performance measures and budget planning models, and analyzing and managing interagency landscape scale projects.

While we recognize shortcomings, we should not lose sight of the extraordinary achievements that have occurred on the ground in the last nine months. Today, national forest resources and nearby communities are protected by an optimum level of firefighters and equipment. That was not the case 9 months ago. During a recent firefighting readiness review in California, fire managers on the Sequoia National Forest described how the new firefighting assets, provided by the National Fire Plan, have helped control wildfires in one day that historically have taken 3–5 days to control. In Utah, we have spoken with people who have said that without the additional firefighters, many of the fires occurring there this year would have grown to a large size.

The rehabilitation and restoration efforts in Montana's Bitterroot Valley are a testament to community and agency partnerships. Research and feasibility studies in bio-energy and biomass production are underway in Colorado, California, and the Pacific Northwest, as we look for alternative ways to improve utilization and reduce hazardous fuels. Contracting Officers are working on a national contract to provide engines and crews from the private sector to assist us with wildland fire suppression and fuel treatment projects. Today, there are unprecedented examples of interagency and governmental cooperation occurring to meet these goals; this, from a program only nine months old.

The list of accomplishments is long, and I am proud of the progress we have made in such a short time.

In discussing the National Fire Plan, I would like to focus on 5 key points:

- Firefighting
- Rehabilitation and Restoration
- Hazardous Fuel Reduction
- Community Assistance
- Accountability.

The status of our actions in these five key areas include the following:

Firefighting Readiness

The National Fire Plan made funds available to increase initial attack capability, increase extended attack support, and provide more resources during large fire episodes. These additional firefighting resources will control more fires during initial attack, thereby reducing wildland fire threats to communities at risk. We have promoted over 980 permanent employees to fill important supervisory positions. Lastly, we have hired 453 people targeted to offset fire leadership retirements anticipated over the next five years. The cornerstone of the Forest Service fire safety program is the training provided to every individual involved in these programs.

The Forest Service adheres to the National Wildfire Coordinating Group fire qualification standards. This training is reinforced with daily, weekly and monthly safety meetings and annual fire safety refresher training. In addition, Safety Briefings are given at the beginning of each shift on an incident.

To enhance our readiness and attack capabilities, our scientists are conducting research to improve monitoring of fuel conditions, enhancing fire risk assessments, improve fire weather and behavior predictions, and increase the accuracy of long term fire severity, fire weather, and climatic conditions. Twenty-two research and development projects related to these improvements have been funded using the Joint Fire Sciences and National Fire Plan programs.

While these efforts will help reduce threats to communities at risk, large wildland fires will not be eliminated. Long term and comprehensive programs in fire prevention, fire suppression, and fuel treatment, involving the States, tribes, communities, and other federal agencies, will be necessary before the current fire environment is changed to one that is less destructive and costly. To this end, we are currently working on improvements to wildland fire planning systems, working with the Congress to expand authorities for the use of federal dollars on State and private lands, focusing fuel treatment in areas where communities are at risk, working with other State and federal agencies to plan interagency landscape level fuel treatment programs, and expanding fire prevention programs.

Rehabilitation and Restoration

Healthy, diverse ecosystems are resilient and less likely to produce uncharacteristically intense fires when they burn. In fiscal year 2001, we have focused on treatment of some of the areas most seriously damaged by fire during the 2000 fire season. In fiscal year 2001, 437 restoration projects are underway to treat 300,000 acres. Watershed restoration is planned for 840,000 acres. Road and trail work will address more than 3,000 linear miles. Habitat restoration will be carried out on 500,000 acres, and forest health projects to treat invasive plants and suppress insects and diseases will cover 280,000 acres. In fiscal year 2001, nine research projects are funded through the Fire Plan in support of rehabilitation.

Hazardous Fuel Reduction

We are investing to reduce fire risk in communities, municipal watersheds, and other areas where conditions favor uncharacteristically intense fires. As of June 30th, treatment projects have been completed on more than 859,000 acres. About 80 % of these acres are treated with prescribed fire. The remaining 20% are treated either mechanically or by hand labor. Estimates of accomplishments projected through the end of the year continue to vary due to unseasonably dry conditions in many regions. In Florida, the state with the largest program, a third year of drought canceled most planned prescribed burning activities. A lower than normal snow pack in the interior West has also left much of that part of the country at high fire danger earlier in the season than normal. Currently, national program managers anticipate that actual hazardous fuels accomplishment will total more than 1 million acres but less than the 1.8 million acres target.

The most important aspect of hazardous fuels reduction is reducing the threat to local communities. When it comes to reducing threat, we need to protect communities and help the communities to help themselves through changing the landscape from high risk to low risk. We'll accomplish that by working closely with communities on major projects. We will be concentrating on projects that will reduce risk.

One dimension of the fiscal year 2001 program of work is the planning effort to prepare for fuel reduction treatments in fiscal years 2002 and beyond. The increased focus on wildland-urban interface areas presents additional challenges in planning, including increased community participation, and increased use of hand treatments and equipment. Nearly 1 of every 8 dollars appropriated for hazardous fuels reduction in fiscal year 2001 is focused on planning activities.

Our work on the ground this year is based on planning done in previous years when there was less emphasis on mechanical treatment and the wildland-urban

interface. Planning underway this year and in the future reflects our emphasis on the interface and ecosystem restoration.

Forest Service, U.S. Fish and Wildlife Service and National Marine Fisheries Service are working together at national, regional and local levels to accomplish consultation under the Endangered Species Act of 1973, thanks to swift Congressional action to clarify the Department of Agriculture's authorities.

Our scientists are conducting research in ranking areas for fuel reduction efforts, determining impacts of these treatments on wildlife, fish and riparian areas, and developing new uses and systems for harvesting forest undergrowth and small diameter trees. Through the National Fire Plan, 24 research projects in support of Hazardous Fuels reduction are funded in 2001.

Community Assistance

We are just completing a successful interagency effort with the States and tribes to better define the communities in the wildland urban interface across the United States. Using State Fire Assistance funds, we have helped states increase firefighting capability, and establish a significant new hazard mitigation program. Over 290 mitigation projects have received grants in 2001, and over 128,000 homeowners in the Western U.S. will receive benefits from treatments. The Cooperative Fire Program has also funded 10 national FIREWISE workshops; educating 870 community leaders from 450 communities in 41 states about methods to increase protection for their communities. Volunteer Fire Assistance funds, to date in the amount of 13.2 million dollars, are being delivered through grants to rural Volunteer Fire Departments providing training and equipment for small fire departments that are often the first line of defense in the interface. The Economic Action Programs are in the final stages of awarding grants for biomass energy systems, small diameter market development, and community economic development and fire planning.

Here are some examples:

1) Bastrop County, Texas has received a $205,000 federal grant for The Texas Wildfire Protection Plan: Lost Pines Project. The grant will provide funding for projects that encompass education, land stewardship, fuel reduction, residential planning and multi-agency partnerships. State and local resources will add an additional $221,000 in match for the projects.

2) Many Southern states have joined together to use National Fire Plan grant dollars to fund an extensive assessment to evaluate the areas of the states that have the highest wildfire risk combined with the value of homes and improved property. The project will fund GIS mapping to display the most at-risk communities. The assessment will serve as a tool for growth planning, determination of fire resource allocations, as well as for educating community leaders and the general public.

3) The Concerned Resource Environmental Workers received a $161,000 National Fire plan grant to construct approximately 25 miles of fire breaks throughout the foothills of Ojai, CA, over eighteen months. At-risk youth and other kids will be the workers on the project to protect the community. Plans are to employ as many 45 youth this summer.

4) Governor Kenny Guinn of Nevada has announced two new public service announcements for radio and television, to recruit volunteer firefighters and seek support for volunteer fire departments in Nevada. Governor Guinn noted support of volunteer fire departments and enlistment of new members is essential to successful fire protection efforts in the small communities of the state. Through a grant from the National Fire Plan, two new public service announcements have been developed. Firefighters representing nine volunteer fire departments in Nevada were used for filming on location at the scene of last summer's Arrow Creek fire in Reno, and in Virginia City.

Accountability

Oversight, coordination, program development and monitoring for performance are critical for the National Fire Plan. We are conducting a series of regional reviews to assess progress. We are working with Governors, the Department of the Interior and other stakeholders to finish a 10-year Comprehensive Strategy for implementation of the National Fire Plan. We have been directed by the Secretaries to fully integrate all of our efforts.

We are committed to demonstrating sound accountability for the funds provided by Congress in support of the National Fire Plan. We have implemented a new financial management system that better tracks federal funding and expenditures. We continue to use existing and new information systems to track program performance and we will soon complete a Third Quarter Status Report on our accomplishments. The agency is using a new system to pilot an automated accomplishment reporting system for fuels, rehabilitation and restoration, and community assistance

functions. Reporting under this system is enabling prompt assessment of output accomplishments. If deemed successful, this reporting system will be expanded for agency-wide use as early as fiscal year 2003. The output measures reported under the National Fire Plan are a key aspect of the broader agency performance measure accomplishment now being incorporated in the Annual Performance Planning process.

The Department of the Interior, National Association of State Foresters and the Forest Service have jointly established an interagency website for the National Fire Plan where people can find out more about National Fire Plan Implementation and ways they can participate in making their homes safer from wildfire. Additionally the Forest Service and Department of the Interior have cooperated in development of the Action and Financial Plans required by Congress. We will continue such cooperative efforts in preparation of the fiscal year 2003 program that will improve the consistency of information.

Fire Management Plans, Land Management Plans and the National Fire Plan

Ninety one percent of the national forests have fire management plans that guide fire suppression actions on initial attack fires and larger fires that escape initial attack. Many of these fire management plans are being updated to meet the guidelines in the 1995 Federal Wildland Fire Policy; however, they currently contain adequate direction for tactical fire suppression initial attack and fuel treatment.

By December 2003, all National Forests will have a fire management plan that meets guidelines established in the 1995 Federal Wildland Fire Management Policy.

Interagency Coordination

Successful implementation of the National Fire Plan requires a commitment among the federal partners to integrate their programs, to the maximum extent practicable, to ensure that implementation proceeds in a standard, consistent, and cost-effective manner across agencies. This we are doing. For example, we should have integrated priorities, accomplishment timeframes, performance measures, and reporting procedures. Our agencies are working to identify and quickly resolve implementation issues as they arise.

Although we have made progress in some of these areas, Secretary Veneman and Secretary Norton have discussed the need for much more thorough integration of program activities between the two agencies and have tasked their respective Deputy Secretaries to ensure that this is accomplished. The findings and recommendations of the Comptroller General will be a useful tool in this effort.

Summary

Mr. Chairman, while we continue with our best efforts to protect communities and forestlands from the effects of unwanted fire, we must now focus our attention to treating the hazardous buildup of vegetation that fuels these fires. The National Fire Plan is the beginning of the solution. We have come a long way and we recognize there are many areas in which we can improve. My staff and I will continue to work closely with the Department of the Interior team and the State Foresters and communities to restore and maintain healthy ecosystems and to minimize the losses from future wildfires. We are hiring and training personnel to improve future fire management capabilities. We are stabilizing and rehabilitating many of the sites damaged during the fires in 2000. The reduction of hazardous fuels reflects an expanded scale of action with extensive planning underway for 2002 and 2003. In cooperation with the States, the list of communities at risk has been revised, and will be an important tool to plan future projects.

This concludes my statement; we would be happy to answer any questions you or Members of the Subcommittee might have.

Mr. MCINNIS. Chief, before we take questions, we are going to go ahead and finish the panel.

Mr. Hartzell, thank you for making time to come over here today and discuss and meet our Committee, again. You may proceed, Mr. Hartzell. You have 10 minutes.

STATEMENT OF TIM HARTZELL, DIRECTOR, OFFICE OF WILDLAND FIRE COORDINATION, U.S. DEPARTMENT OF THE INTERIOR

Mr. HARTZELL. Thank you, Mr. Chairman and members of the Committee. I would like to thank the Committee members for their kind words about the concern for the safety of our firefighters. I make that acknowledgment for three reasons:

One, as an employee who lost a supervisor on a fire in Idaho; a supervisor who lost an employee on a fire in Colorado—

Mr. MCINNIS. I am sorry, could you pull the mike a little closer.

Mr. HARTZELL. Yes. And, lastly, a witness who has three children fighting fire in the West right now. So I would like to acknowledge the Committee for their concern for the firefighters' safety.

Mr. Chairman, I am here to talk about our success in implementing the National Fire Plan. The National Fire Plan is a very big effort. It is a bigger task I think than any of us realized. The National Fire Plan represents an unparalleled amount of work for both our fire community and our resources community.

And I think we need to recognize we are suffering from a period of inactive management, public land management, and as a result, we have a huge job ahead of us. We have tremendous fuel buildups, and we have tremendous issues to deal with, but we can't accomplish the strategy laid out in the National Fire Plan overnight, we can't accomplish it in a month or two, and we certainly couldn't accomplish it in the first 6 months of this administration. But I am here, and I am pleased to report that we have made significant progress, and I am also here to acknowledge that much remains to be done.

I think our progress is reflected in several areas, and I will highlight specific examples of what we have done to date. But we have made significant strides in increasing our collaboration with States and local communities and tribes. We have made significant strides in increasing the level of our fuels treatment. We have shown that we are capable of working more closely together, in a seamless fashion, with the Forest Service.

A few statistics to help you understand how far we have come in a short time. We have already completed rehabilitation on more than one million acres of the severely burned lands from last summer. Our target was 1.4 million acres. We are now very close to achieving that target.

A year ago last year we had roughly 4,700 firefighters and support staff in the field. Because of the National Fire Plan and our hiring commitments, we have an additional 1,800 people in our fire program. I think it is important to know that, of those, 1,400 are front-line firefighters, and they are out there on the ground, throughout the country today.

Also, we have placed orders for almost all of the necessary firefighting equipment that we had listed in our financial and action plan, which we sent up to the Congress in January. Included in that amount are 40 new heavy engines and 38 new light engines. And, in addition, we have contracted for 10 additional fixed-wing aircraft and 11 additional helicopters.

Last fire season, because of the intensity and magnitude of the fire season, resources were stretched throughout the country. We

experienced some difficulty in hiring firefighters with the necessary supervisory experience. This year we are doing several things to counter that:

One, we are using financial incentives; one, we are waiving the mandatory separation age for physically fit supervisory firefighters this year; and we are establishing or we are about to establish a cooperative agreement with Australia and New Zealand that will allow us to use upwards of 200 of their experienced supervisory personnel if the fire season demands.

We also estimated, under the fire plan, that we could provide assistance to 820 rural Fire Departments throughout the country. We would provide this assistance with a new $10-million appropriation we got for that purpose this year. I am pleased to tell the Committee that, as of the end of June, we have already provided assistance grants. We have made 945 assistance grants to these small, rural fire departments.

Also, since February, when our new Secretary took office, we have treated nearly an additional 430,000 acres of hazardous fuels, compared to only 100,000 acres in the first 4 months of the fiscal year. Depending on weather conditions, we may be able to treat another 250,000 acres before the end of the year. I want the Committee to know that we will continue this vital fuels treatment work, and we are committed to, and ready to complete, treating the 700,000 acres that may be carried over into next fiscal year as early as this fall.

Also, to ensure that we meet our commitments to fuels treatment, we have designated one person in each of our four bureaus as a fuels treatment coordinator to ensure that this important work is carried out and that it is coordinated across administrative boundaries.

One aspect of our fuels work that I would like to mention needs improvement and will get improvement is our outsource contracting. We are not yet satisfied with the level of contracting activity. We are addressing this problem in several ways. Most importantly, perhaps, by hiring additional contracting personnel. We are also assuring that all of our agencies, not just Interior, but between Interior and Forest Service, share contracting lists, and we post, also, on our National Fire Plan website the names and phone numbers of all of our fuels management and contracting specialists.

One of the problems we encountered is that many of the small communities throughout the country lack a contracting infrastructure, and this is a difficult problem to solve. In these communities, we are conducting a substantial amount of outreach. We are going to the community leaders, we are going to the businesses, we are going to the Chambers of Commerce, and we are going to the newspapers, we are going to community colleges to explain to people the opportunities that will occur in the future, and do occur now, for contracting for fuels hazard reduction.

I think it is also important that I talk a bit about our need in the Department of Interior to establish even a better implementation track record with the National Fire Plan with the Forest Service. One of the things the Committee should be aware of that in the first week on the job our new Deputy Secretary, Mr. Griles, had a meeting with his counterpart at the Department of Agri-

culture to talk about ways that they could improve the collaboration in the oversight and accountability as we jointly administer the National Fire Plan.

The other thing that I would like to draw to your attention is the fact that we have a Secretary that is actively engaged in the National Fire Plan and the monitoring and oversight of the National Fire Plan. And she is very interested in the fire program, in general, and our success on the ground. She has done several things that have been very helpful to us.

One, she immediately exempted firefighters from the government-wide hiring freeze.

She also has issued a couple memorandums that are moving us down the road to better coordination within our Department. Number one, a memorandum that established a National Human Resources Committee to assure coordination for the hiring of firefighters the next fiscal year; and, secondly, a National Fuels Coordination Team.

I think that the two Departments have been working closer than ever before, as we implement the National Fire Plan. I am in regular contact with my counterpart at headquarters, Mr. Laverty. There are several long-term issues with the National Fire Plan that we are going to address, we plan to address and are addressing.

Number one, together with the Office of Management and Budget, we are going to be reviewing our current model for determining the number of firefighting personnel and the equipment needed for a normal fire season. And our objective is to update that model to reflect current conditions, revise policy in the strategic direction contained in the Federal Wildland Fire Policy and the National Fire Plan.

The other thing the Committee should know is that we are conducting a full audit of our fire suppression dollars this fiscal year, and we also plan to be revising our performance measures to ensure uniform accountability between the Forest Service and the Department of Interior. We will do that jointly with the Forest Service.

We are also increasing our emphasis on updating our fire management plans. And both of our Departments are working jointly with the National Academy of Public Administration to develop a joint set of recommendations to improve accountability in the program.

And, lastly, I want the Committee to know that we are determined to work with the National Academy of Public Administration. We are determined to work with the General Accounting Office, OMB, State foresters and any others who make thoughtful and sound suggestions for improving the fire program.

Before closing, I would like to say that we have talked about the tragic loss of firefighters in Washington, and with that in mind, in getting ready for this fire season, our emphasis has been on training, training and recertification of our existing firefighters. We feel that our firefighters are appropriately trained for the type of assignment they are given. When they are dispatched to a fire, we believe it is within the full confidence that they have the training, the knowledge, and the experience required for the task ahead.

Firefighter training has been developed by fire experts over many decades. Safety is emphasized in every course we do. In everything we do, everything we say, safety is emphasized.

Mr. Chairman, I appreciate the opportunity. We believe we have made good progress toward reversing the trend of the deteriorating trend of our forests, and we look forward to continuing to work with the Committee.

[The prepared statement of Mr. Hartzell follows:]

Statement of Tim Hartzell, Office of Wildland Fire Coordination, U.S. Department of the Interior

Good afternoon, Mr. Chairman and members of the Committee.

Introduction

I appreciate the opportunity to address this committee concerning the Department of the Interior's progress on the implementation of the National Fire Plan. My name is Tim Hartzell and I oversee the Office of Wildland Fire Coordination for the Department of the Interior. I am pleased to report that the Department of the Interior firefighting agencies have made significant progress in implementing the National Fire Plan. We at the Department of the Interior are grateful for the opportunity and recognize that there is more work to do that will be done in order to lessen the dangers to communities at risk, restore ecosystems and the natural role of fire, protect our critical natural resources, and most importantly, keep our firefighters and the public safe.

General Overview And Progress To Date

The National Fire Plan represents an unparalleled amount of work for the fire community at every level. It is a huge job, one that cannot be accomplished overnight, or in two months or in the first six months of the Administration. However, the Administration has made progress. That progress is reflected in our hiring, fuels treatment projects, collaboration with States, tribes and local communities, and in our efforts to make sure the Forest Service and the Department of the Interior are working together to protect lives and property and to care for our damaged ecosystems.

A few important statistics tell the progress we have made:

This year, as in previous years, more than 95% of fires are suppressed while they are still small.

We have already completed rehabilitation on more than 1 million of the 1.4 million acres that were severely damaged by fires last year.

A year ago, more than 60,081 fires burned 3.4 million acres. As of today, 49,708 fires have burned 1.5 million acres. This year's fire season is also below the 10 year average of 52,735 fires and 1.9 million acres burned.

A year ago at this time, we had 4,710 fire fighters and support staff. This year, we have 1,800 more people in the fire program, and of those, 1,400 are front-line fire fighters.

We have placed orders for almost all the necessary firefighting equipment and contracted for additional aircraft called for in the National Fire Plan to support wildland firefighting.

During last year's fire fighting season we experienced difficulty in hiring supervisors with fire experience. This year we are using financial incentives, waiving mandatory retirement ages for physically fit fire fighters and establishing cooperative agreements with other countries that allow us to use their supervisory personnel if the fire season demands.

Since February 1st, when Secretary Norton took office, more than 413,000 acres of fuels treatment have been done, as compared to 100,000 acres in the first four months of this fiscal year. Depending on weather conditions, an additional 250,000 acres will be treated before the end of the fiscal year. More acres would have been treated had it not been for severe drought conditions and moratoriums placed on prescribed burns. We will continue this vital fuels treatment work into the next fiscal year to complete the remaining 700,000 acres of projects that are ready to be treated. We have selected one person at each of the Department's four bureaus with fire fighting responsibilities to coordinate fuels treatment work. We are already working with the states to identify further fuels treatment projects, and to complete the environmental clearances necessary so that fuels treatment work can begin. One aspect of the fuels treatment work that needs and will get improvement is outsource contracting. We are not yet satisfied with our level of contracting activity. We are

addressing this problem by hiring additional contracting personnel, sharing contractor lists among all agencies and posting on our websites the names and telephone numbers of Federal employees directly responsible for contracting. Many communities lack contracting infrastructure. This is a more difficult problem to solve. In these communities, we are conducting outreach for community leaders, businesses and chambers of commerce. One example of this was BLM's program to hire 80 unemployed farmers in Klamath Falls, Oregon, to do fuels treatment work.

The Department of the Interior is also addressing the need to establish even better implementation of the National Fire Plan and to work more closely with the U.S. Forest Service. In the first week after Deputy Secretary Steve Griles was confirmed by the Senate, Secretary Norton directed him to work with his counterpart at the Department of Agriculture to develop cabinet-level joint oversight of the fire program, and to develop one set of goals and performance measures. Deputy Secretary Griles has already met with Agriculture Deputy Secretary Jim Mosely to begin work, and even more important, to conclude it.

Even before Deputy Secretary Griles was confirmed, Secretary Norton has been working to improve Interior's fire suppression and fuels treatment programs, and to seek better cooperation with the U.S. Forest Service. Her first visit outside Washington was a working session with the fire directors at the National Interagency Fire Center in Boise. Her first official acts as Secretary were to exempt firefighters from the government-wide hiring freeze and to release more money to do more environmental clearances for fuels treatment projects. Her chief of staff holds weekly meetings to identify and review obstacles that are impeding progress in achieving hiring and fuels treatment goals. Secretary Norton has asked for a report on how Interior's four bureaus can work more cooperatively in both suppressing fires and doing fuels treatment.

The Interior and Agriculture Departments have been working closer than ever before. I am in regular contact with my counterpart at the Department of Agriculture. Together with the Office of Management and Budget, the Interior Department and Forest Service will be reviewing the current model for determining the number of firefighting personnel and equipment needed for "normal fire seasons" with the objective of updating that model to reflect new information and data, revised policy and the strategic direction of the National Fire Plan. We will be conducting a full audit of dollars expended in the fiscal year 2001 fire season. We will also be revising performance measures, along with the Forest Service, to assure accountability and consistent results of the National Fire Plan. We will be working with our land managers to update fire plans. Both of our departments are working cooperatively with the National Academy of Public Administration to develop a joint set of recommendations to improve the program. We are determined to work with NAPA, GAO, state foresters and others who make thoughtful and sound suggestions for improving the fire program.

The next few weeks will decide the scope and magnitude of the fire season. We have greatly benefitted by the good fortune of having fewer ignitions. However, it is also true that some of the success we have had so far can be attributed to having more fire fighters, more equipment, and having done more fuels treatment. We are grateful for the bipartisan support that the fire program has had in Congress.

Before further highlighting the work we have done and the work that remains to be done in implementing the National Fire Plan, I would like to talk about keeping our firefighters and the public safe in light of the recent loss of five firefighters.

Firefighter and Public Safety

On the afternoon of July 10th, fourteen firefighters and two civilians took refuge in fire shelters in Washington State's northern Cascade Mountains. Four of the firefighters who deployed their shelters in a boulder field did not survive. On the same day, an air tanker crashed in northern Idaho, claiming the pilot's life.

When a firefighter dies, a genuine, deeply felt sorrow ripples through the fire community. No one is immune from the sense of grief. Everyone pauses and reflects on the risks that are a part of firefighting, and how things can be made safer next time. My hope is that, in the aftermath of tragedy, everyone in the fire community is again reminded that safety always comes first. Secretary Norton issued a reminder to everyone that safety is our primary responsibility. Firefighting is an inherently dangerous occupation, and we cannot mitigate every hazard. What we can do is recognize risk, manage it, and minimize it, whenever possible.

In getting ready for this fire season the emphasis has been on training and recertification. Federal firefighters are appropriately trained for the type of assignment they are given. When they are dispatched to a fire, it is with full confidence that they have the training, knowledge and experience required for the task ahead. Firefighter training has been developed by fire experts over many decades. Safety

is emphasized in every course, from basic training through the most advanced classes. Firefighters are trained to remain calm, think clearly, and act decisively in potentially dangerous situations. This training has prevented untold numbers of entrapments, injuries and fatalities.

Accomplishments under the National Fire Plan

The National Fire Plan directs that the Departments of Agriculture and the Interior carry out the following activities:

- Continue to make all necessary firefighting resources available
- Restore landscapes and rebuild communities
- Invest in projects to reduce fire risk
- Work directly with communities
- Be accountable

As outlined by the following summary of accomplishments, we have made significant progress on all fronts.

1. Continue to Make All Necessary Firefighting Resources Available

Preparedness. This year marks the first year the Department of the Interior has been funded at the full readiness level. Thanks in large part to Congress, we are better prepared to fight fires this year than ever before. This funding has increased our ability to hire additional firefighters and purchase necessary equipment. As a result, we are better able to respond to initial attack incidents efficiently, effectively and safely. Because of the time lag between ordering and delivery of much of the specialized firefighting equipment, it will take up to one year to realize the full potential from this funding increase.

Hiring. The Department has made hiring a top priority. In April 2001, Secretary Norton recorded firefighter recruitment public service announcements (PSAs), which were distributed to 5,000 radio stations nationwide. This markedly increased interest in our firefighter program. As of July 25, 2001, the Department has hired approximately 80 percent of a total of 8,103 fire personnel—approximately 1,800 more than last year. Of this increase, approximately 1,400 are frontline firefighters.

One important component of hiring was the conversion of a large number of positions from temporary to career status. This provides the Department with additional supervisory capabilities on large fires. The effort continues to be a work-in-progress and will not be completed until next year. When finished, it will significantly increase large fire suppression capabilities, as well as further improve our initial attack capabilities.

Purchase of additional fire equipment and contracting for additional aircraft. All or most of an additional 110 pieces of equipment have either been purchased or ordered. All or most of the contracts for an additional 24 aircraft, including helicopters, single and multi-engine airtankers, large air transport, air attack and smokejumper (jumpships) aircraft have been processed.

Re-evaluating normal year readiness calculation. The Department is jointly re-evaluating normal year readiness calculations with the Forest Service for consistency between the agencies, to use the most current science available in determining preparedness needs, and to factor in performance measures.

Agreements with Australia and New Zealand for firefighting support. The Departments of Agriculture and the Interior will soon sign agreements with Australia and New Zealand to formalize the exchange of fire suppression assistance. Both Australia and New Zealand assisted the Departments last year, during the worst fire season in 50 years. This could provide up to 200 additional supervisory firefighters as the fire season warrants.

2. Restore Damaged Landscapes and Rebuild Communities

Burned Area Rehabilitation. The Department of the Interior targeted approximately 1.4 million acres that were severely damaged from last year's fires. As of July 25, 2001, we have completed 80 percent of the rehabilitation work. Much of this work is multi-year projects, with immediate site stabilization followed by restoration of native vegetation. Successful restoration, especially on public rangelands devastated by the annual weeds and wildland-fire cycle, is critical to the long-term health of these ecosystems and an eventual return to a more natural fire regime and reduction of catastrophic blazes. The Department recently revised its Departmental Manual on Burned Area Emergency Stabilization and Rehabilitation. To implement the manual, a draft handbook was distributed for use during the 2001 fire season. After this fire season, it will be revised in light of what worked and what did not.

Native Plant Materials Development Program. To protect areas severely damaged by wildfire and unlikely to recover naturally, an interagency team of Department of the Interior and Department of Agriculture employees has been formed to develop

a long-term strategy to supply native plant materials to meet this need. This team is developing a strategy to increase the supply of native seed, with the help of our non–Federal partners.

3. Invest in Projects to Reduce Fire Risk

Hazardous fuels treatments. For Fiscal Year 2001, the Department planned to treat hazardous fuels on an estimated 1.4 million acres. Much of this was to be accomplished through the use of prescribed fire. The Department may not achieve this acreage due to drought conditions in the Southeast, Pacific Northwest, Northern Great Basin, and Northern Rockies. A severe fire season may also hamper fuels treatment efforts, as many of the same personnel involved in fire suppression are also responsible for prescribed fire project planning and implementation. As of July 23, 2001, we have treated 515,348 acres.

Secretary Norton issued a memorandum to bureau directors to ensure that coordinated, efficient and effective fuels treatment occurs on all Interior lands. This memo established a fuels management team to provide guidance for fuels treatment project selection and to coordinate with the Forest Service and State agencies.

Wildland Urban Interface (WUI) interagency collaborative working groups. The Department of the Interior has worked with the Forest Service, the National Association of State Foresters, the Western Governors" Association, and other State organizations to establish locally led interagency teams that will prioritize hazardous fuels treatment projects in the wildland urban interface. Instruction memoranda have been provided to these groups to help them select projects for treatment. This process will guide implementation of the national fuels reduction program in the WUI for fiscal year 2002 and provide a preliminary project list for fiscal year 2003.

Utilizing Small Diameter Material and Other Biomass.

- Joint Fire Science Program (JFSP) research. A large, 5-year project begun in 1999 includes 11 sites nationwide where scientists will study the fuels "treatment costs and utilization economics" of biomass, including small diameter fuels. Research is planned on evaluating factors affecting the feasibility of economically viable utilization of biomass material removed to reduce fire hazard and fuel loading.
- Buncom Landscape Project, in the Bureau of Land Management (BLM) Medford (OR) District, utilized small diameter trees. This forest health project focused on the restoration of oak and pine savanna habitat for the benefit of wildlife and fire prevention. Landowners coordinated thinning, burning, planting, and noxious weed control treatments with their neighbors and the BLM to create wildlife habitat that reaches across numerous ownership boundaries and connects watershed uplands with aquatic lowlands. Small diameter trees were thinned to reduce the effects of years of fire suppression. Approximately 95,000 trees yielded more than 18 million board feet, and provided jobs for numerous local contractors.
- Eastern Nevada Landscape Restoration Coalition project, Ely, NV, producing biomass material. The BLM Ely District in eastern Nevada has committed to produce 50,000 to 100,000 tons per year of pinyon-juniper biomass to restore and improve habitat for sage grouse and Rocky Mountain elk. The project will treat over 100,000 acres in fiscal year 2001. The coalition involves 75 Federal, State, and local governments, private foundations and environmental groups, and local community and industry leaders. The coalition is exploring markets for the biomass material, including fuel for wood-stove pellets, bioenergy or cogeneration, fiber or flakeboard and a variety of other nontraditional forest products.

Allocating Necessary Project Funds.

Transfer of funds for environmental consultations. In addition to the allocation of project funds to appropriate field units, funds were transferred to the Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) to hire personnel to facilitate threatened and endangered species consultations. The FWS and NMFS have added staff to accommodate the increased workload, and are working cooperatively with the Fire agencies to plan projects for fiscal year 02 and beyond. This will expedite fiscal year 2002 and 2003 clearances for fuels treatment projects designed to reduce risks to communities and priority watersheds.

4. Work Directly with Local Communities

Contracting with local businesses and organizations. In January 2001, the Department of the Interior, along with the Forest Service, developed policy guidance to implement a streamlined approach to awarding contracts to local businesses and organizations for hazardous fuels treatment projects and landscape restoration. This

policy will be implemented on an interagency basis in each of the 11 Geographic Areas currently used for firefighting coordination across the country. In each Geographic Area, one of the Federal agencies has taken the lead for contracting. In some cases, the geographic area has been subdivided and agency leadership designated to facilitate work. The policy requires an organized approach for community outreach and coordination to locate and develop firms with which we can contract and assist communities developing local fuels reduction and restoration capability.

Increasing employment and contracting opportunities in Idaho. The Department, along with the Forest Service and the State of Idaho are working together to increase opportunities for local contracting and recruiting in support of the National Fire Plan, particularly for unemployed natural resource workers, including ranchers, farmers, loggers, and forest product workers.

Increasing employment and contracting opportunities in Oregon. The BLM Klamath Falls Office, OR, has started a 3,000 acre wildland urban interface fuels reduction project that includes tree thinning, brush removal, and slash piling in and around Bly Mountain. The project is providing temporary jobs for up to 80 displaced farm workers in the drought-devastated Klamath Basin. The BLM has hired four contractors who have begun recruiting workers in the local area. The Oregon Department of Forestry and local elected officials are assisting the BLM in planning, support, and community relations.

Improving Local Fire Protection Capabilities Through Financial and Technical Assistance to State, Local, and Volunteer Firefighting Efforts.

- Rural Fire Assistance. In 2001, Congress established a new $10 million Rural Fire Assistance program. The Department developed policy to guide implementation of this pilot program. The program is providing rural fire departments with needed assistance in training, equipment purchase, and prevention activities to increase firefighter safety, enhance fire protection capabilities, enhance protection in the wildland urban interface, and increase the coordination among local, State, Tribal, and Federal firefighting resources. The Department estimated that approximately 820 of the 3,223 rural/volunteer fire departments adjacent to Interior lands and within the wildland urban interface would receive funds and benefit from the pilot program this fiscal year. As of June 2001, 944 awards have been given to rural and volunteer fire departments, totaling $5.1 million.

Expanding Outreach and Education to Homeowners and Communities about Fire Prevention Through Use of Programs such as FIREWISE.

The FIREWISE program, developed by the National Wildfire Coordination Group in 1986, provides information to homeowners, county officials, building contractors, firefighters and others about practices that can lessen the risk of wildfires to communities. Through the National Fire Plan, $5,000,000 is targeted in fiscal year 2001–3 for development and delivery of a series of national FIREWISE workshops. Participants at the State-level workshops might include representatives from the construction industry, homeowners associations, insurance industries, local governments, and rural fire departments. The workshops are presented as a "Training-of–Trainers" experience, with the expectation that participants will return to their host organizations or communities and, in turn, conduct similar workshops at the local level. The Secretaries of Agriculture and the Interior will soon record interagency public service announcements to increase awareness of the FIREWISE program.

5. Be Accountable

Interagency coordination. The Departments of Agriculture and the Interior coordinate with each other on an ongoing basis. Representatives in each Secretary's office work together to ensure consistency of policy and messages. Individuals at both the Forest Service and Department of the Interior responsible for implementing the National Fire Plan work closely together.

Monitoring of implementation. The Department is monitoring fire management programs. The Rural Fire Assistance pilot program will be evaluated at the end of this fiscal year to determine effectiveness. The Council on Environmental Quality has made several site visits to determine how the environmental review process occurs (NEPA/ESA consultation) on hazardous fuels treatment projects. In addition, we have taken other steps to be more accountable:

- Recommending staffing for a Department of the Interior wildland fire policy office. The objective of the office is to ensure the implementation of the National Fire Plan and the Federal Wildland Fire Policy, coordinate budget formulation and fire policy, provide program oversight, measure program performance, and ensure accountability.

- Development of a National Fire Plan Data Reporting System. A contract has been awarded to develop an automated database to track progress in meeting the goals set out in the National Fire Plan, related documents, and associated performance measures. The target is to have a pilot system operational by the end of 2001.
- National Academy of Public Administration (NAPA) Report. The Department has commissioned a report by NAPA, which will concentrate on six areas from the 2001 Review and Update of the 1995 Federal Wildland Fire Management Policy:
  * Management accountability
  * Interagency coordination
  * Intergovernmental coordination
  * Improving risk management
  * Workforce management
  * Institutionalizing lessons learned

NAPA expects to complete the report by mid–November, 2001. Results of this study, along with internal reviews, will be used to review oversight and coordination mechanisms of the National Fire Plan and to assure that an effective strategy is in place to institutionalize the 2001 Federal Wildland Fire Policy.

- DOI Cohesive Strategy - The Department of the Interior is developing a cohesive strategy to provide the Interior agencies with a framework for reducing the risk and consequences of unwanted wildland fire by protecting, maintaining, and restoring land health and desired fire cycles. This strategy has been coordinated with the Forest Service.
- 10–Year Comprehensive Strategy. Developed by the Department and the Forest Service in partnership with the Western Governors" Association, this strategy will be a template for how the Departments of Agriculture and the Interior will collaborate on the National, State, and local level to implement the National Fire Plan.
- Interagency National Fire Plan website. The Department of Interior and the USDA Forest Service, with feedback from the National Association of State Foresters, developed a joint National Fire Plan interagency website (www.fireplan.gov). The goals for the website are to:
  * Provide an interagency information clearing house
  * Provide one place for the public to get information on a variety of topics
  * Provide mechanisms for public involvement in implementing the National Fire Plan
  * Demonstrate that Federal and State wildland fire agencies are taking a cohesive and carefully planned approach to implementing the 2001 appropriation
- The Southwest Strategy. The Southwest Strategy is a community development and natural resources conservation and management effort among Federal, State, Tribal and local governments working in collaboration to restore and maintain the cultural, economic and environmental quality of life in the states of Arizona and New Mexico. A Fire Plan Implementation Coordination Group under the Southwest Strategy integrates local interagency and inter–Tribal planning and implementation of the National Fire Plan among the States of Arizona and New Mexico.
- Interagency Fire Management Cooperation in the Pacific Northwest. The Oregon/Washington BLM Branch of Fire and Aviation Management, and the Forest Service Pacific Northwest Region, Directorate of Fire and Aviation Management, have been officially integrated at the State Office and Regional Office level since 1995. Employees work on an issues basis, rather than on an agency basis. The National Fire Plan is implemented on an interagency basis. The interagency office works with all of its State, local and Federal partners in all aspects of fire management.
- Wyoming Governor's Wildland Fire Action Team. All Department of the Interior bureaus participate in this intergovernmental fire steering group. The team was established to coordinate all fire suppression and fuels reduction activities in Wyoming.
- National Fire Plan Collaboration Coordinators Conference Denver, Colorado. A cornerstone of the National Fire Plan has been enhancing the communication among all partners in the wildland fire management arena. To this end, all of the National Fire Plan coordinators from the Department of the Interior and the Forest Service, and representatives from the Environmental Protection Agency, Council on Environmental Quality and others, assembled in Denver on February 21 and 22, 2001, to share concerns and issues, clarify roles and expectations, validate the importance of success, and define a management structure for collaboration at the geographic area level throughout the country. This meet-

ing provided a springboard to unify State, Tribal and Federal efforts to cooperate across jurisdictions, coordinate plans and activities, and collaborate with local governments to implement efficiently and effectively the goals and commitments outlined in the National Fire Plan.

Conclusion

I appreciate the opportunity to testify at this hearing. We believe that we have made good progress in reversing the trend of deteriorating health for our forest and rangeland ecosystems. We view the National Fire Plan as an investment that will, in the future, help protect communities and natural resources, and most importantly, the lives of firefighters and the public.

The Department has made real gains in working with all of its partners to implement the National Fire Plan, but it has required a shift in the way we have traditionally conducted business, and a shift in the way we implement nearly every fire management program. Just as we need time to acquire all the new, specialized fire equipment, we will need time to continue to make fire management seamless across the Federal, Tribal, State and local agencies, so that we may better protect lives and resources, and restore ecosystems to a functioning condition.

We are committed to these goals, and look forward to your continued support.

Thank you, again. I will be happy to answer any questions from the committee.

Mr. MCINNIS. Thank you, Mr. Hartzell.

I will begin the questioning with the panel. First of all, Mr. Hartzell, I missed your comment at the beginning. You talked about your 40 heavy new engines and your 40 lighter engines. Now, are those contracted? You have got those or you have been able to secure that equipment, and it is in place for utilization?

Mr. HARTZELL. Those are not contracted. Those are procurement items, and they are special order items. The heavy engines have to be, they are special made, and they may take anywhere from 12, 14, upwards of 18 months to receive delivery of those items.

Mr. MCINNIS. I would assume the same would exist for helicopters and so on. So this is equipment that is not really here to help us this year, but hopefully we will have it on the ground next year?

Mr. HARTZELL. The helicopters are contracted, and they are available this year to assist.

Mr. MCINNIS. And, also, you said the Secretary is actively involved. "Actively" meaning what? I know you went through a couple of points there, but I am assuming—obviously, I have a longtime relationship with her. She is from Colorado. I think she has a pretty good understanding of the danger we face out there. I just want to be sure that this is going to the Secretary's desk for supervision and so on.

Mr. HARTZELL. Mr. Chairman, we have, in our Department, weekly chief of staff meetings, where all of the Bureau directors, the chief of staff, the Deputy Secretary are together in a room. We get the four Bureau fire directors on the phone with us out at the Fire Center, and it is not at all uncommon for the Secretary to come into those meetings to engage the Bureau directors and the fire directors in discussion about their progress on the National Fire Plan.

Mr. MCINNIS. Chief, a couple of questions.

One, I am wondering about the recommendations of the GAO. I would hope that you would integrate those with your comprehensive strategy moving forward.

Mr. BOSWORTH. Yes. I haven't gone through the recommendations carefully. I read through it quickly. Obviously, when GAO has

recommendations, they are things we want to look very carefully at because often they have some really good ideas.

I think that you asked earlier about the notion of a czar or some kind of a person like that. I would just like to make a comment about that. My view is that we have been at this for about 9 months now, and we have a lot to learn and a long ways to go to improve. I think we need to look at all opportunities, but it is key, it is critical that we stay tuned in between the USDA and between Interior. I think we are doing that fairly well, but I think that there is still room for improvement.

I wouldn't want to jump to a solution, in my opinion, quite yet because I think that we have got to identify what the problems are very carefully and make sure that we craft solutions for those problems. And that may be a solution, but I am just not sure enough yet to say that I would really advise that.

To me, the place where we do the very, very best, at least in the Forest Service, in terms of integrating with other agencies, is in the area of fire suppression. In the area of fire suppression, when you go out on a project fire, you don't know whether it is a Forest Service person, a BLM person, a Park Service person, a State person. These overhead teams are fully integrated, and they work very, very well together.

We can learn a lot about how we operate on our suppression side, we can learn a lot toward how we might be able to operate, as far as the other aspects of the National Fire Plan from that.

Mr. MCINNIS. Thanks, Chief. I think you are right. And I am not sure that the Fire Czar is the answer, but the key that I know because I have been—I used to be a firefighter and a police officer, and I can tell you, for example, at Storm King, you need to have somebody that your chain-of-command that arrives and is in charge. There, we had lots of different agencies. Everybody was set back emotionally because of the loss we just suffered. The whole town turned out with shovels, and picks, and some volunteers were heading up the mountain on their own, I mean, just out of good intent. And that coordination between these agencies, what equipment needs to come in, what people need to come in, and also the decision-making process, I think you ought to have somebody onsite.

This was the Thirty Mile Fire was a cleanup. That is why that crew with so little experience was in there. As I understand, it is the typical experience of a crew that is sent in for cleanup. They didn't know this was going to occur, obviously, and they are in there doing, this is how they learn about the firefighting. It is pretty routine. But we need to have somebody who could very quickly make decisions, overriding decisions on what we are going to utilize. It all comes back to that chain-of-command, and that is where I think we have to focus.

I appreciate, again, and also I want to compliment you, with so few months in service, keep it up. We have all got to work together as a team on this.

Mr. Inslee?

Mr. INSLEE. Thank you, Mr. Chairman. I just want to note that the young woman that the Chairman has referred to is named Rebecca Welch, a 22-year-old employee. And I just want to point out,

because this was an enormous tragedy, but I hope people understand that there were several heroes there, and one of them was Rebecca Welch, who saved two American citizens out of this that probably would not have survived this, but for Forest Service activity. I hope that your people take some pride in their actions in this regard and Rebecca's.

I need to ask a few questions relating to this incident. I think it will be helpful in the general policy discussion. In the area of the Okanogan fire, was that an area that there was any planning would have pretreatment or thinning or was this an area that would not have been treated in any event? Can you describe the conditions and how it related to the fire plan relating to any thinning proposals.

Mr. BOSWORTH. That area would have been a very, very low priority. It just would not have been an area where we would have been doing thinning. It was a long ways from a community, homes, and it was close to the wilderness area. It is a back-country area and had a road going up to it, but, no, the answer is we would not have been putting our dollars into thinning that area for fire purposes.

Mr. INSLEE. So, I guess, people could be confident that the inability of the lack of treatment was not related to this tragedy, I would take that from your comments.

Mr. BOSWORTH. That is correct. Also, I did not, I want to add that there is a resource natural area designation to the forest plan for a portion of that area that was burned, also, where the fire was.

Mr. INSLEE. And how would that affect decisions regarding how to approach this particular fire that was in a resource natural area?

Mr. BOSWORTH. Well, essentially, since it was a person-caused fire, then our objective would be to suppress the fire, which is what we did.

Mr. INSLEE. Could you articulate that a little bit more. You and I have talked about this, just yesterday, about this, but I take it that the current policy is to treat a fire differently if it is caused by human conduct; is that correct?

Mr. BOSWORTH. You may treat it differently. If it is a person, you know, in this case, it was a campfire that was left burning, then we need to suppress the fire. Now, there are places in the national forests where we have done fire planning and will allow fires to burn under certain conditions, particularly if they are going to meet some kind of land management objective, and so we make that decision based upon the conditions and the preplanning that has been done.

In this case, since it was a person-caused fire, suppression was indicated.

Mr. INSLEE. Could you, and perhaps anyone of the panel could answer this, but could you give us some idea about the area that, given an unlimited budget, the Forest Service would want to have some treatment, some thinning of some nature on relative to what has been done in the last couple of years. Could you give us any ballpark figures on that? I am just looking at the GAO report, and it refers to 211 million acres, almost one-third of all fire-adopted

Federal lands continue to deteriorate. Is that a real number, and how does that compare to what we have been able to do to date?

Mr. LAVERTY. Mr. Inslee, in the Interior West, between the Department of Interior and the Forest Service, we have identified about 100 million acres at moderate to high risk that are in need of some type of treatment, but our plan, I think our strategies, would be such that it probably is not going to be feasible or reasonable to expect to treat all 100 million acres. But in terms of fuel conditions, that is a representation of what we are experiencing in the Interior West.

Mr. INSLEE. So what have we done or are we going to do in the next year? And I assume it is a very, very, very, very small percentage of 100 million acres, but—

Mr. LAVERTY. We are making good progress. Between Interior and the Forest Service, we have identified about 3 million acres that we plan to treat in 2001. We have already treated in excess of 1.2 million, and we are moving along fairly well to accomplish that target. Our expectation is that in 2002, we would probably be at that same level of investment again.

Mr. INSLEE. Let me ask you about decisions on how to go about that treatment. In the original fire plan, my understanding is, is that there was a basic policy statement made that we would not look to commercial harvest of mature or late successional trees, as part of this treatment strategy. And we, at least our staff, received a number of reports that, in fact, we are having harvests of mature and late successional trees. In fact, we have also heard, and again this may not be accurate, I like your comment on it, that some agencies are using funds associated with the treatment category for use of actually preparing commercial timber sales. I just wonder if you can tell us what the policy is at this moment about harvest of commercial, mature, late successional trees as part of the treatment program.

Mr. BOSWORTH. I believe that it is really on a case-by-case basis. Most of the time what we need to be doing is thinning the smaller material, thinning from below, and being able to get fire back into an are where you don't have, you know, getting rid of some of the heavy fuels and the vegetation that is in there.

But there are some places where just taking some of the small material may not be the right thing. You may need to remove some larger material in order to open it up. Say, for example, a dry pine type, you might want to open that up and get it closer to what its natural condition ought to be and then get fire burning through there the prescribed way, controlled way.

Mr. INSLEE. Thank you. Thank you very much. I hope that you will pass on to all of your employees our national appreciation for their efforts and our sometimes unspoken recognition of the danger they face.

Thank you.

Mr. BOSWORTH. I will do that.

Mr. MCINNIS. Thank you, Mr. Inslee.

Mr. Peterson, you may proceed.

Mr. PETERSON. Thank you and good afternoon.

Reading the GAO report, I wanted to refer to Page 3. It says, "The failure of five Federal agencies, land management agencies, to

incorporate into the National Fire Plan many of the Federal Wildland Fire Management Policies regarding principles and recommendations can be traced to the reluctance to change their traditional organizational structures of Federal wildland management. As a result, the five agencies continue to plan and manage wildland fire management activities primarily on an agency-by-agency basis."

Is that a fair accusation?

Mr. BOSWORTH. Well, I think that, as I said earlier, I believe that, particularly in the area of fire suppression, we are extremely integrated on our crews. I mean, when we get on a project fire or we have an incident command team that goes to the fire, and there are 30 or 40 people on that overhead team, they are likely to be from several different agencies, all working together under the incident commander, and that has been the case for a number of years.

Now, as you get to, and when we start talking about the restoration of the burned areas that were lost in the fires last year, that is a little bit different situation. I know that in most of the national forests, we are working aggressively to do that restoration work, but we are coordinated with the Bureau of Land Management particularly, and there is Bureau of Land Management lands are in the same area.

Then, in terms of the fuels, and planning for the fuel reduction, we are looking at that on a landscape basis, where the Forest Service and BLM work together, along with the States and the private communities to plan out what are the highest priority and where we need to be doing the treatments and what kind of treatments.

And then in terms of building our firefighter workforce up to the most efficient level, we have been working very closely between the Forest Service and BLM on that aspect on the hiring and the identification of the people that we need.

Mr. PETERSON. But do all five agencies coordinate making sure adequate personnel are available and plans coincide somewhat?

Mr. LAVERTY. If I could maybe answer that, Mr. Peterson. I really believe that we do, and some of the things that Tim and I have been working on is the actual hiring and recruitment of these firefighters we brought on as a result of the National Fire Plan. There has been really good coordination among the States, as we work with the BLM, and the Interior lands and the Agency lands.

In terms of training, we have coordinated training so that we are not duplicating those kinds of efforts. And even in the placement of these crews, there is coordination that goes on, not only with the agencies, but even among the States so that we are not bunching up all of the resources in one particular location. So there really is some incredible coordination that goes on.

Just to build on what Dale talked about, in today's paper, we saw Joe Carvello up in Jackson Hole. Joe is the incident commander for the Jackson Hole fire. That fire team, if you were to see that today, would be made up of people from the Park Service, probably from the BLM, the Forest Service, and even State personnel, so that it is truly the manifestation of what the coordination is that we are talking about, and it works well. It works extremely well, in terms of the incident commander being able to call those resources. And

I am convinced the fact that we didn't burn any structures in Jackson Hole today is because of the fire plan and the resources that Mr. Carvello had available to him.

Mr. PETERSON. So there, again, it was agency coordination.

Mr. LAVERTY. Absolutely.

Mr. HAYWORTH. And, Mr. Peterson, also, as we move forward to complete our fire management plans, there is very clear and open dialogue now among all of the Federal partners, Forest Service and Interior that we need to approach this fire management planning in a seamless way rather than the four Interior bureaus developing their own individual plans and then Forest Service developing their plans. We look at a landscape, and we develop a fire management plan.

The fuels problems out there don't adhere to the administrative boundaries, and the solutions shouldn't either, and that is the approach that we are going to be taking in the future as we develop fire management plans.

Mr. LAVERTY. Mr. Peterson, one other piece, if I could just add in—

Mr. PETERSON. Sure.

Mr. LAVERTY. That, again, reflects I think how the agencies are working together is in the development of the comprehensive strategy that we have been working with the governors across the country to develop an integrated, comprehensive strategy on how are we going to address the fuels not only on the Federal lands, but coordinate that on the State and private lands as well. That is ready to be signed probably 2 weeks from today, and coordinating with the governors.

Mr. PETERSON. This is more of a new development of this kind of coordination.

Mr. LAVERTY. Yes, sir. It is one of the directions that came out of the conference report.

Mr. PETERSON. Back to the Endangered Species Act for just one question here. It would seem to me that a hot fire is probably the greatest danger any species, endangered or not, faces. I mean, not too many live through it, do they? I mean, a hot fire, from what I have—

Could it be possible that during any actual fighting of a hot fire that people are worrying about incidentals of the Endangered Species Act, when the ultimate danger to the species is roaring at them? I mean—

Mr. BOSWORTH. Well, I can't really say what was going on in any particular person's mind and what they are worrying about. But, again, we try to do preplanning on these kind of things. So we understand what—we don't want to do more damage with the suppression than what the fire is going to do. So we have plans ahead of time so that we can make sure that we are doing the fire suppression in a way that minimizes the damage to soils, to watersheds, to threatened or endangered species. But there is no question that when you get hot fire going through some drainages, you can have an effect on threatened or endangered species.

Also, like I mentioned earlier, what I saw in the Bitterroot Valley last week with mud slides, you might end up with the same problem with the mud slides.

Mr. PETERSON. Thank you. We have run out of time.

Mr. MCINNIS. Thank you, Mr. Peterson. I hate to interrupt like that, but we do have two more panels and a number of members that would like to ask questions.

Mr. Udall, you may proceed.

Mr. UDALL OF NEW MEXICO. Thank you very much, Mr. Chairman.

I wanted to ask a couple of questions about the Thirty Mile fire. It seemed, with your testimony, that you said that we are putting out every human-caused fire, that that is the policy. Is that the policy?

Mr. BOSWORTH. On that particular forest, and that plan there is that if it is a man-caused fire, that you suppress it.

Mr. UDALL OF NEW MEXICO. And where is that policy written?

Mr. BOSWORTH. I believe that that was the management for the resource natural area, the management plan for the resource natural area.

Mr. UDALL OF NEW MEXICO. In the resource natural area, where the fire was started?

Mr. BOSWORTH. That is correct.

Mr. UDALL OF NEW MEXICO. And there is a policy for that particular resource natural area, that says we put out every human-caused fire?

Mr. BOSWORTH. I believe that is correct. I will have to check it and make sure, but I believe that is in the planning guideline, in the plan for the write-up for the resource natural area. It is also in our 1995 policy, that we suppress man-caused, person-caused fires, the Federal Wildland Fire Policy.

Mr. UDALL OF NEW MEXICO. The 2001 Federal Fire Policy clearly states that the response to wildland fires, based on the Fire Management Plan, not the ignition source or the location of the fire, and that is at your 2001 update page, page 4, so I don't see how these two fit together, even though the Thirty Mile fire was human-caused, conditions may have warranted confinement or a monitoring response, or perhaps even allowing the fire to burn under a prescribed burn. This was a very remote area, wasn't it?

Mr. BOSWORTH. It is a fairly remote area, that is correct.

Mr. UDALL OF NEW MEXICO. And in one of these resource natural areas, they are banned, aren't they, the fighting of fires and aerial retardants and things like that?

Mr. BOSWORTH. That is not correct. It depends on the conditions. We don't have any place where we ban fighting fires. It depends upon all sorts of prescribed conditions that we evaluate ahead of time before we have any fire.

Also I would like to say that under the 1995 Wildland Fire Policy, we suppress all human-caused fires. You are correct that there are some statements in the 2001 policy, but it also has to be consistent with state arson laws, and when you make sure with state arson laws that were not allowing, in some states, particularly, that were not allowing person-caused fires to burn.

Mr. UDALL OF NEW MEXICO. This fire, the Thirty Mile fire, ended up taking the lives of these four people, and it was fought, I guess, to the tune of 4.6 million, and it was really put out by the weather,

wasn't it? It ended up the weather changed and that is what got it under control?

Mr. BOSWORTH. I don't know the specifics of the final days of the fire, but almost all cases where we have a large fire that is burning, that we don't get a handle on it till we get some help from the weather.

Mr. UDALL OF NEW MEXICO. And don't you think there is—in terms of looking at this fire and looking at where it was started and how remote it was, and that the Forest Service wouldn't have been a lot better off to have left this continue its natural course rather than attack it with crews and fire retardants and all that?

Mr. BOSWORTH. No, sir, I don't. You remember that was July 10th. That is fairly early in the fire season. We had another 8 weeks probably of fire season to go. We had multiple fires burning on the Okanogan National Forest, one fire that was approximately 1,000 acres. We had no idea how much—how many resources we would have for fires, and I would be would be very, very concerned about letting a fire go that early in the fire season under those conditions, when you have the kind of drought that we had, and I think that the Forest's actions to suppress a fire were exactly right.

Mr. UDALL OF NEW MEXICO. Attached to this, the Incident Management Situation Report, is a chart at the end that talks about wildland fire use or the prescribed fires and acres year to date. Looking at this and looking at all the areas, it looks like that very, very little acreage is being burned in terms of prescribed fires. I mean, is that an accurate wildland fire use? Very little of it is—this chart here shows that we are not really allowing it to take its course.

Mr. LAVERTY. I think that chart that you are referring to is a correct representation of what is actually taking place. I know from talking to the folks down on the Gila, that they had a fire earlier this summer that they had planned to go to 30,000 acres of fire use fire. Weather put it out. And I think we are finding more and more of those examples.

We have one right now in Colorado in the Mount Zirkels, that is about 1,000 acres, and it could go up to probably 15,000 acres if the weather would permit that. So in situations where we do in fact have these prescriptions in place, we are able to make those happen. So they are happening, and in fact, there are some in the Frank Church right now that are actually burning in terms of fire use. So there is more and more of those coming along. But we just need the weather to help us.

Mr. UDALL OF NEW MEXICO. Thank you very much. And I know these are very difficult decisions, and I thank the panel for their testimony.

Mr. MCINNIS. Thank you, Mr. Udall.

As a courtesy to the ranking member, Mr. Inslee has a follow up.

Mr. INSLEE. I appreciate that, Mr. Chair.

Chief, I just wondered, I certainly and maybe others have some question about different policy based on the source of the fire. For instance, this was probably negligence, I take it, around a campfire. Could you help us by giving just, at a later date, not necessarily today, a little more description of specifically indeed what the policy is for the Forest Service? You might relate it to this fire

as well. I think that would be helpful. I think that there are some legitimate issues about what the policy should be on negligently-caused human fires, whether that should change really our policy or not. I personally at the moment don't think it should, but I would appreciate if you can just give that to us in writing. We appreciate it.

Mr. BOSWORTH. Sure.

Mr. MCINNIS. Thank you, Mr. Inslee.

Mr. Duncan.

Mr. DUNCAN. Thank you, Mr. Chairman. I will be very brief. I apologize. I didn't get to hear much of the testimony of the witnesses because of another meeting.

But, Mr. Bosworth, the GAO tells us that while a lot of the west is burning, that the southeast really has more communities at risk, and I suppose that is because we are of a higher population concentrations. Have you looked at that, or do you feel that you are going to be better able to respond or to respond more quickly, since there are more communities at risk, or have you given that any consideration?

Mr. BOSWORTH. I am going to ask Lyle to add a little bit, but first I would like to say that in the South we do have a number of places where we have communities at risk, just as well as we do in the interior West, and in fact, I was just looking at some maps today in Georgia, where—just pictures of where all the homes were around, schools were. We are in the same kind of circumstance. We have also increased the fire-fighting capability in the South. We are accomplishing a lot of our acres in broadcast burning or prescribed burning is being done in the South.

Do you want to add to that?

Mr. LAVERTY. If I could just add, Mr. Duncan, even on top of the acres that we have treated already in terms of prescribed fire, a majority of those have actually come from the South and the Southeast, a very, very strong component. And I think recognizing again that we do in fact have communities. One of the pieces specifically, in Tennessee, we were able to bring a hot-shot cool on for that Southeast part of the country as part of the National Fire Plan, that I think helps us even be more responsive to some of those communities.

Mr. DUNCAN. All right. Then let me ask you this. I am told by the staff that one group sent out an e-mail last month saying that they opposed thinning of the forests even if it would reduce the impacts of wildfire. Would a totally hands-off approach increase the risk of more fires as we have seen in the last couple of years?

Mr. BOSWORTH. I just do not support a hands-off approach dealing with the fire and fuel situation. We need to be actively managing, particularly around these communities and these watersheds. We need to be doing some thinning. We need to be getting prescribed fire back in, and I don't support a hands-off approach.

Mr. DUNCAN. Do you see active management as somehow being harmful to the environment?

Mr. BOSWORTH. I believe that active management can be harmful to the environment if it is not done correctly, but it also believe that active management can be done in a way that is not harmful to the environment, and that is what we attempt to do.

Mr. DUNCAN. All right. Thank you very much.

Mr. PETERSON. [Presiding] The gentleman from Colorado, Mr. Udall.

Mr. UDALL OF COLORADO. Thank you, Mr. Chairman. I wanted to welcome the panel as well. Thank you for taking your time today to be here with us. I want to focus, Chief, and Mr. Laverty and Mr. Hartzell, on Colorado's front range, if I might. It is a prime example of the so-called urban wildlands interface. In Colorado we actually have another term. We call it the Red Zone. It has been extensively mapped, and we have identified these areas where developments are closest to the forests and where wildfires provide the greatest threat to homes and communities.

The main reason I have supported the fuel reduction part of the fire plan is because I have understood it would focus on these interface areas. And so I am concerned, based on what I have heard and read, that at this point only a small part of the fuel reduction work has taken place in those areas, so I would like to direct a few questions at all of you in that regard.

Am I right that only 25 percent of the acres treated to reduce fuels have been in the interface area?

Mr. BOSWORTH. That is probably correct, about 25 percent. But I would like to point out that when this started 9 months ago, we have been trying to be very clear to people that this first year we would have to take existing projects that we already had completed planning and the environmental impact statements for, and that that is the kind of projects that we would be doing this first year, which in many cases weren't focused on the wildland urban interface. At the same time though, as we are planning our projects for next year, those projects are being planned in the high-risk areas in the wildland urban interface.

Mr. UDALL OF COLORADO. In this fiscal year, Chief, the Forest Service expects to treat about 60,000 acres in Colorado? Again, I want to ask you if you think that is an accurate number, and if so, how many of those acres are in the interface area?

Mr. BOSWORTH. I am going to have Lyle answer that.

Mr. LAVERTY. If I could take that, Mr. Udall.

Mr. UDALL OF COLORADO. I figured Mr. Laverty might, since he has been—and by the way, been very attentive to Colorado and I have enjoyed working with him.

Mr. LAVERTY. I believe that the region is working hard to accomplish that 60,000 acres. We have had some early rains. We have lost some opportunities because of the monsoons that have come. My guess is that we will probably be a little short of that 60,000, but just as Tim talked about, we will be able to carry those over.

I would expect that as we look at all the projects and the accomplishments at the end of the year, that probably 25 plus percent of those will be urban interface project. Maybe a little bit more in Colorado, because I think we did have a few more projects that were urban interface projects than some of the other regions.

Mr. UDALL OF COLORADO. If you look at the GAO study, of course, they have got a map that has the number of communities by state identified by Interior as being at the highest wildfire risk, and Colorado and Utah in the West have the largest number of dots. I note that my colleague, Mr. Duncan of Tennessee, has quite

a few as well. But again, I point that out just to underline the concerns that we have in Colorado in this regard. Also I think we have enormous opportunity to create some exciting new markets potentially for these materials for biomass and other uses.

With that, let me—I don't want to leave the Interior Department out of this, so I will direct a question to Mr. Hartzell. How many acres in Colorado do you expect to treat, and how many of them will be in this interface area?

Mr. HARTZELL. Mr. Udall, I think this year we had roughly 12,000 acres in the wild and urban interface that were targeted for treatment, and we have completed roughly 3,000 of those acres.

Mr. UDALL OF COLORADO. 12,000 treated?

Mr. HARTZELL. 12,000 planned in the wildland urban interface, 3,000 treated. Many of our projects this year were heavily oriented toward prescribed fire. There are projects that had been in the planning stage for two or 3 years. I believe in the out years, particularly around communities, you are going to see a shift in emphasis to using more mechanical means. Where we have dangerous fuels, we need to thin the forest first.

Let me just quickly say that I don't have the specifics, but I know through this collaborative partnership that we have got with all of the state foresters for the State of Colorado for next year, somewhere in the vicinity of 50 to 60 projects totalling 7-1/2 to 8-1/2 million dollars has been identified in the wild and urban interface.

Mr. UDALL OF COLORADO. I thank you for that additional information. That was my next question.

Does it cost more to reduce fuels in these interface areas, and are there any factors that make it harder to do this fuel reduction work, say, compared to more remote areas? And I would direct that also to the Forest Service.

Mr. HARTZELL. I can tell you that this year, in our department, it costs roughly 7 times more per acre to do a wildland urban interface treatment. The reason for that is when you are working up against a community, you have got heavy fuels, mechanical thinning is needed to thin the fuel.

Mr. BOSWORTH. I would say that it is a similar cost in the Forest Service. It definitely costs more to do it in the wildland urban interface for the same reasons he was talking about. And I think it is really important to recognize that it would be dangerous for us to focus only on the number of acres that we accomplish, because if we want to accomplish acres, we can go to easy places, but they may not be the right places. It may be the chief ones, but maybe not the right ones. And all of our strategy is to find the right places, even though it may cost more because of the kind of treatments we have to do.

Mr. UDALL OF COLORADO. That is a fair point.

Mr. Chairman, I thank you for the time, and I don't know whether we will have a second round, but I would certainly ask unanimous consent that we could extend further questions to all of the people who have testified today. Thank you, Mr. Chairman.

Mr. PETERSON. The gentleman from Idaho.

Mr. SIMPSON. Thank you, Mr. Chairman.

I always hate to use these for personal reasons, but since I have got you here, I will ask you. I got a place that is just over the pass in Jackson Hole. What does that fire look like today?

Mr. BOSWORTH. It is in good shape.

Mr. LAVERTY. That is in good shape.

Mr. SIMPSON. In good shape?

Mr. BOSWORTH. Actually, it is in pretty good shape.

Mr. SIMPSON. Doesn't look like it will go over the pass?

Mr. BOSWORTH. No, but when I was flying over it a couple of days ago, I would have not said the same thing, but I mean I would not have been surprised, when I was flying over it about 3 days ago, whether it would go over the pass, but it is my understanding that it looks a lot different today.

Mr. SIMPSON. Well, I appreciate that. It makes my August a heck of a lot more friendly.

You mentioned about the 2002 fire plan, the projects that have been planned and so forth, and some of those are going to be put on hold and delayed and so forth because of appeals and litigation. What are the basis for some of those appeals and litigations that you anticipate?

Mr. LAVERTY. There are a number of themes. I was just talking to the folks on the Bitterroot on one of the rehab and restoration projects that they are working on, another project that was a fuels hazardous reduction outside of a community just outside of Hamilton. And there is a variety of issues that surface on why, threatened endangered species, clean water. Those are some of the elements that are already surfacing in some of the early appeals that we are beginning to see on some of the fire projects. So it would be—those are the concerns I think that people are expressing.

Mr. SIMPSON. I am curious as to whether we have done more damage, as an example, in the Clear Creek fire area? I am sure you have flown over and seen some of the mud slides and so forth that have occurred when you get a little moisture. Do we do more damage to threatened and endangered species habitat when that occurs, than we would if we got in and did a sound job of thinning, trying to reduce these forest fires so they aren't quite so catastrophic?

Mr. BOSWORTH. Of course, it depends on which threatened and endangered species we are talking about, and it varies, but from a water quality standpoint, you know, I believe that when we end up with mud slides like I saw in the Bitterroot and the feedback I got from the biologists there was, was that that was very damaging to the—it wiped out the habitat. I also believe that if we had done some strategic kinds of placement of thinning and prescribed burning over the last 15 or 20 years, we may have—the whole area may have looked a whole lot different.

Mr. SIMPSON. So are you suggesting that we can actually, if we do it correctly, and we plan properly, and we are sensitive to the environment that we are trying to protect, that we can actually potentially protect threatened and endangered habitat, clean water and so forth, by doing active management, rather than just letting it go by its wayside?

Mr. BOSWORTH. I believe that we can—that that is correct, yes.

Mr. LAVERTY. Mr. Simpson, if I could just add onto that. The basic premise of the cohesive strategy that we put together about a year ago, which became one of the foundations of the National Fire Plan, speaks exactly to that point, that by managing these in a healthy, functioning condition, that we can improve the resilience of these ecosystems to function in this kind of a fashion and now lose habitat.

Mr. SIMPSON. I appreciate that. One of the things that was just mentioned is the source of the fire and the decision of whether to go put a fire or not and that type of thing. What does the source of the fire have to do with it? I mean I know that sounds like a stupid question, but does a tree know how the fire started?

Mr. BOSWORTH. No, but again, I mentioned arson laws, for example. If a person starts a fire, then they have some responsibility for what happens when that fire burns.

Mr. SIMPSON. Well, it would seem to me that the thing that would be the deciding factor is the condition of the forest and what the goal was, regardless of how it started.

Mr. BOSWORTH. That is a primary concern is the condition of the forest, but again, if—to me it is a very slippery slope when you start deciding to allow anybody that happened to start a fire, to decide to allow those fires to burn. I think that we could have some real problems, and we have in recent—there are some unintended consequences that could happen from that. And we don't allow, just because it is a lightning-caused fire, doesn't mean we are going to allow it to burn, but under very specific conditions, where there are certain things that can—you know, some beneficial use that would take place from a fire that has been analyzed and public involvement way ahead of time, we understand exactly what the fuels are supposed to be, the fuel moisture is supposed to be, and what the weather is supposed to be, how late and early it is in the year. We may decide to allow one of those fires to burn.

Mr. SIMPSON. Does the fact that we have such huge fuel loads in our forests make it more likely that we are going to have to put out fires because of the potential that they are going to be catastrophic once they start burning? And, therefore, if we could actually reduce the fuel loads, you could actually get back to a system where natural fires were allowed to burn because they wouldn't become as catastrophic, as they currently do?

Mr. BOSWORTH. Well, particularly around communities, if you have got heavy fuel loads, you don't want to allow a fire to burn because you can't control it, and you may not be able to—you know, it is just too much risk.

But, on the other hand, I fully support allowing fires to burn under certain conditions back in the back country and wilderness areas, some of the roadless areas, and if we have done—even along the interface areas, if we had done the thinning, and we have been doing prescribed burning every 15 or 20 years, and a fire starts, it may not make much difference if it burned or not.

Mr. SIMPSON. If I could just ask one real brief one before I finish. An awful lot of people don't like the words "commercial harvest," and if you go out and thin forests and somehow that wood is used for something that could be commercially valuable, that is commercial harvest and you are in trouble. Some of these thinnings are ac-

tually going to be for commercial purposes, and some of them will probably address the mature successional trees as you look at areas to try to reduce the fire hazard.

I am curious. What is the health—I mean, you are a professional fireman. What is the health of that mature successional tree going to be? Just out of curiosity. I know this is an off-the-top question, and I am just wondering what you think it will be after this is put out.

Mr. BOSWORTH. It will probably be a pretty dead tree when that is done, but there—

Mr. SIMPSON. Thank you. I appreciate your being here today.

[Laughter.]

Mr. BOSWORTH. Could I respond to one other thing, just very briefly?

Mr. PETERSON. Just briefly.

Mr. BOSWORTH. Okay. I would like to go back to the business about leaving—you know, person-caused fires burning. And one of the things I think people need to think about is if in that—if we had allowed that fire to burn, say, in Thirty Mile Canyon, if those two civilians were up there, if they had been caught in that fire and it was one that we had allowed to burn and it was a person-caused fire, I think there are some real major problems when we allow those things to happen. So we have got to be very, very careful about those kind of choices, particularly when they are person-caused.

Mr. PETERSON. The Chair thanks the gentleman.

The gentleman from Idaho, Mr. Otter.

Mr. OTTER. Thank you, Mr. Chairman.

Who was held accountable, then, for the Los Alamos fire and what happened?

Mr. HARTZELL. Mr. Chairman, the Los Alamos fire, the Board of Inquiry concluded that those employees followed existing policy and that the policy was flawed.

Mr. OTTER. That the policy was flawed?

Mr. HARTZELL. That is correct.

Mr. OTTER. So nobody gets fired, nobody has to pay up? You know, we had some folks that their tire went flat in Idaho when they were traveling down the highway—actually, I think they were from Minnesota. But their tire went flat on their trailer and it threw out a bunch of sparks and caused a fire, burned about 180,000 acres. Their insurance company paid—I don't know—2 or 3 million bucks. But because we were following policy and it was a flawed policy—who made the policy? Can we go back to the deep pocket here or to the source of the policy and lay some blame and get some credibility back into the system?

Mr. HARTZELL. The issue was that the 1995 Federal wildland fire policy that was referred to had not been institutionalized and was not reflected—that the guidance on that policy was not reflected in the manuals and handbooks that were being followed by the Park Service employees.

Mr. OTTER. I see. Actually, I was just following up on that because it was curious to me that it seemed like we were looking to lay liability, and I know in several instances we have been able to

lay liability on bad policy and the reasons for it as bad policy, but then we can't find anybody to hold accountable.

You know, I am like some of my colleagues here, when I first heard about the four deaths, I reflected back when I was a firefighter on the Sundance fire. I reflected back that when my son was on the first strike crew, the hot-shot crew for the Sawtooth National, and my son-in-law, who is now initial attack crew on the Panhandle, the first thing I thought of wasn't, you know, whether or not somebody was going to disrupt the environmental policy of this country. I thought about the families and the mothers and the fathers and the sisters and the brothers. And I think a public policy that is absent the sensitive soul that we should have here for human life is a public policy that is drastically flawed.

So, having said that, I want to get on, I guess, with what this hearing is really all about. Mr. Bosworth, you are only on the job here a very short period of time. You have got an administration that is pretty new in place. The GAO report, which I have read, actually reflects time when you haven't even been on the job. In fact, your team, the administration team, isn't even in place yet, is it, totally?

Mr. BOSWORTH. Well, there are still a lot of positions to be filled. That is correct.

Mr. OTTER. Do you expect to have a team that will be coordinated with the five agencies, that will have a singularity of purpose in our National Fire Plan when we get this administration's team—I understand why the other administration's team didn't work well together. But I would expect that when we get our team in place, when this administration team gets in place, don't you have some high expectations of some coordinates and compatibility in enforcing and establishing our National Fire Plan?

Mr. BOSWORTH. I am very optimistic about that. I really do believe that when we get, you know, a little time, we will see improvements every day as we move forward. I am very optimistic about that.

Mr. OTTER. You were asked several questions about why would you put out that fire if it was manmade or it was lightning-made. In Idaho, I remember one time in 1995—actually, 1994, we had 1,400 lightning strikes in a single evening, which resulted in about 400 fires, but many of them were small. And one of the fires that we were noticed on was what we call now the Blackwell Corral complex fires. We were noticed—I was Lieutenant Governor and Acting Governor at the time because Governor Andrus had gone out of town, out of the State. And we were requested by the Payette National Forest to let it be. And so we let it be. Then, finally, when it hit—that was when it was at about 50 acres. When it hit 500 acres, they started deploying some initial resources to the fire. When it hit 5,000 acres, they decided this could get serious; 287,000 acres later, we decided that maybe we should have gone in and put—and let the folks on the ground make the decision, call the shots as to whether or not major resources were going to be wasted as a result of that fire.

So let me just say that I hope this national policy plan that we come up with and the one we are going to be enforcing is going to include a generous helping of reason and logic and folks on the

ground—and I know, Mr. Bosworth, you have said earlier in your testimony that was one of the great hopes and aspirations that you had for your time at the steering wheel, was to get the people back on the ground involved.

Mr. BOSWORTH. That is correct.

Mr. PETERSON. I thank the gentleman from Idaho, and we would like to thank the panel, Forest Chief Bosworth and Mr. Laverty and Mr. Hartzell from the Department of Interior. Thank you for your willingness to come today. We are going to invite the members to do written questions for the record if they would like, and you can respond to them.

Thank you very much for your generous time and your candid answers.

Mr. BOSWORTH. Thank you.

Mr. PETERSON. We will now call on the second panel. Our second panel will be Barry T. Hill, Associate Director on Energy Resources and Science Issues, U.S. General Accounting Office, and his support team. Welcome and please proceed.

We are going to limit the questions to 3 minutes to try to give everybody a chance to ask questions. So I will warn you first.

Mr. INSLEE. Mr. Chair, could I add something?

Mr. PETERSON. You are recognized.

Mr. INSLEE. Thank you. As ranking member, I may not be able to listen to your testimony. I need to excuse myself briefly. I will try to get some written questions to you if I don't get back in time.

And just one other comment. In response to Mr. Otter's comment, I wanted to assure this panel and everybody in this room, I think there is bipartisan concern about the individuals involved in fighting this fire. I went up to Harborview Hospital and met with Mr. Emhoff's family while he was in surgery about this. I think this is something we share on a bipartisan basis.

Thank you.

Mr. PETERSON. I thank the gentleman, and, Mr. Hill, please proceed.

STATEMENT OF BARRY T. HILL, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, U.S. GENERAL ACCOUNTING OFFICE

Mr. HILL. Thank you, Mr. Chairman and members of the Subcommittee. It is certainly a pleasure for us to appear before this Subcommittee this afternoon to discuss implementation of the National Fire Plan. Before I begin, allow me to introduce my colleagues.

With me today, on my right, is Charlie Cotton and, on my left, Cliff Fowler, who are responsible for leading the ongoing wildfire work we are doing for the Subcommittee and for the information we will be presenting today. And if I may, I would like to briefly summarize my prepared statement and submit the full text of my statement for the record.

Usually, our testimony is based on an issued GAO report. However, in this instance, our work for you is still ongoing. Instead of an issued GAO report, we do have for each member of the Subcommittee a copy of the 2001 update of the 1995 Federal wildland fire management policy. This policy provides the philosophical and

policy foundation for Federal interagency fire management activities conducted under the National Fire Plan. If Agriculture's Forest Service and Interior's National Park Service, Fish and Wildlife Service, Bureau of Land Management, and Bureau of Indian Affairs were adhering to the policies, guiding principles, and recommendations contained in this document, we would likely have many positive things to say about how these five Federal land management agencies are implementing the National Fire Plan.

However, many of the policies, guiding principles, and recommendations, especially those that present challenges to traditional organizational structures, have not been implemented. As a result, the five agencies cannot ensure that they are spending the almost $2.9 billion appropriated for wildland fire management for fiscal year 2001 in an efficient, effective, and timely manner. Nor will they be able to account accurately for how they spend or what they accomplish with the $30 billion that they say they need over the next 10 years to implement the plan.

Let me take a moment and explain why the National Fire Plan is important, not just from a budgetary perspective but from a human perspective as well.

Human activities, especially the Federal Government's decades-old policy of suppressing all wildland fires, have resulted in dangerous accumulations of hazardous fuels on Federal lands. As a result, conditions on 211 million acres, or almost one-third of all fire-adapted Federal lands, continue to deteriorate. According to the Federal wildland fire management policy, these conditions have increased the probability of large, intense wildland fires beyond any scale yet witnessed. Coupled with the explosive growth of people and structures in the wildland-urban interface, these fires will, in turn, increase the risk to communities, watersheds, ecosystems, and species. They will also place in jeopardy the lives of the public as well as the firefighters charged with controlling or suppressing them.

As the Federal wildland fire management policy recognizes, the challenge facing the Congress and the administration is not finding new solutions to an old problem but of implementing known solutions. After every severe fire season or when human lives have been lost battling wildfires, working groups or commissions are established, reports are issued, and recommendations are made. Unfortunately, just as every wildland fire eventually dies out, so has the collective will to effectively implement these recommendations.

The National Fire Plan represents the latest effort to address wildland fire on Federal lands. Two conditions set this effort apart from prior efforts: first, congressional recognition of the need to sustain increased funding for wildland fire management in future fiscal years; and, second, congressional direction to reduce the risk of wildland fire in the wildland-urban interface. However, implementation of the National Fire Plan currently lacks the coordination, consistency, and agreement called for in the Federal wildland fire management policy. Let me cite a few examples.

First, although the Congress directed the five Federal land management agencies to reduce the risk of wildland fire in the wildland-urban interface, they currently do not know how many communities are at high risk of wildland fire, where they are

located, and what it will cost to reduce the risk. Therefore, the agencies are not positioned to set priorities for treatment or to inform the Congress about how many will remain at high risk after appropriated funds are expended.

The agencies have attempted to identify high-risk communities. However, the number of communities has ballooned from almost 4,400 in January to over 22,000 in May. Moreover, rather than continue to work toward a jointly published list of communities, as the Congress directed them to do, Interior and the Forest Service have gone their separate ways. From the list of over 22,000 communities, Interior has identified 545 communities near its lands that it determined to be highest risk. However, if you look at the two charts that we have brought today, on the chart to my right it shows the location of the major fire occurrences that happened last year, and the chart on my left shows the communities that Interior has identified as being at highest risk to wildfire.

Two hundred and seventy-eight, or over half of these communities, are in three Southeastern States—Georgia, North Carolina, and Tennessee—which are not prone to severe wildland fires. Conversely, California and Idaho refused to prioritize their communities on the initial list of 4,400, and as a result, Interior did not include any communities in these two fire-prone States.

Meanwhile, by October, the Forest Service plans to develop its own separate list of highest-risk communities from the list of over 22,000. However, it plans to allow each of its nine regional offices to work individually with States within its boundaries to develop nine separate lists of highest-risk communities.

Efforts under the National Fire Plan to prepare for and suppress wildland fires also lack the coordination, consistency, and agreement called for in the Federal wildland fire management policy. For example, the five Federal land management agencies cannot agree on the priority to be given to preparing fire management plans. These plans are critical to determining preparedness needs for fighting wildland fires because they identify, among other things, which fires should be suppressed and which should be allowed to burn. However, 6 years later, only the 60 units managed by the Bureau of Land Management have fully complied with the policy. Of the remaining 1,323 units managed by the other four agencies, 768, or 58 percent, still do not have a plan that complies with the policy. These 768 units encompass about 121 million acres, or 31 percent of all the acres with burnable vegetation managed by these four agencies.

Another example of this problem relates to the process used to request the equipment needed to be fully prepared to fight future wildland fires. For fiscal year 2001, the Congress gave the agencies the opportunity to request the needed equipment. However, each agency identified its own equipment needs, and as a result, the Forest Service failed to ask for about $44 million that it needs to procure hundreds of pieces of equipment, including fire engines, bulldozers, water tenders, trucks, as well as associated supplies.

Similarly, the Fish and Wildlife Service failed to request about $8 million it needs to procure about 90 pieces of firefighting equipment. So for these two agencies, it is not clear when they will reach

the firefighting capacity envisioned with the funding provided for fiscal year 2001.

Mr. Chairman, these examples lead to the inevitable question: Why? Why have the five Federal land management agencies failed to incorporate into the National Fire Plan many of the Federal wildland fire management policies, guiding principles, and recommendations? We believe the reason can be traced to their reluctance to change their traditional organizational structures of Federal wildland fire management. As a result, the five agencies continue to plan and manage wildland fire activities primarily on an agency-by-agency and unit-by-unit basis. Unfortunately, wildland fire does not recognize the administrative boundaries of Federal land units. Moreover, although efficient, effective, and timely implementation of the National Fire Plan will require an interdisciplinary approach, Federal fire managers and managers in other disciplines—including those responsible for wildlife and fisheries and vegetation and watershed management—have been reluctant to forge the necessary new working relationships.

According to the Federal wildland fire management policy, an entity is needed with the authority to provide the necessary strategic direction, leadership, coordination, conflict resolution, and oversight and evaluation into the full range of affected agencies and disciplines. Although it is early in the implementation of the National Fire Plan, it is clear that its implementation also requires such an entity. Therefore, we encourage the administration and the Congress to consider all the alternative organizational structures identified in the policy, including establishing a single Federal wildland fire management entity.

Mr. Chairman, this concludes my statement. We would be happy to respond to any questions that you or other members of the Subcommittee may have.

[The prepared statement of Mr. Hill follows:]

Statement of Barry T. Hill, Director, Natural Resources and Environment, U.S. General Accounting Office

Mr. Chairman and Members of the Subcommittee:

We are here today to discuss the results of our preliminary work for you on the implementation of the National Fire Plan. The National Fire Plan is not a single, cohesive document. Rather, it is composed of various documents, including (1) a September 8, 2000, report [1] from the Secretaries of the Interior and of Agriculture to the President of the United States in response to the wildland fires in 2000; (2) congressional direction accompanying substantial new appropriations for wildland fire management for fiscal year 2001; and (3) several approved and draft strategies to implement all or parts of the plan.

In addition, the 1995 federal wildland fire management policy, [2] updated in 2001, [3] provides the philosophical and policy foundation for federal interagency fire management activities conducted under the National Fire Plan. Incorporating the policy's guiding principles and recommendations into the plan presents unusual, if not unique, challenges to traditional organizational structures. Wildland fires do not

[1] Managing the Impact of Wildfires on Communities and the Environment, A Report to the President In Response to the Wildfires of 2000, Secretaries of the Interior and of Agriculture (Sept. 8, 2000).

[2] Federal Wildland Fire Management Policy and Program Review, Report to the Secretaries of the Interior and of Agriculture by an Interagency Federal Wildland Fire Policy Review Working Group (Dec. 18, 1995).

[3] Review and Update of the 1995 Federal Wildland Fire Management Policy, Report to the Secretaries of the Interior, of Agriculture, of Energy, of Defense, and of Commerce; the Administrator, Environmental Protection Agency; and the Director, Federal Emergency Management Agency, by an Interagency Federal Wildland Fire Policy Review Working Group (Jan. 2001).

recognize the administrative boundaries of federal land units. Therefore, the policy requires coordination, consistency, and agreement among five federal land management agencies in two departments—the National Park Service, the Fish and Wildlife Service, the Bureau of Land Management, and the Bureau of Indian Affairs within the Department of the Interior and the Forest Service within the Department of Agriculture. Moreover, an effective strategy to reduce the risk of wildland fire requires a full range of fire management activities, including management-ignited fires (prescribed fires) and other fuel treatments, such as thinning. Therefore, the policy requires an interdisciplinary approach in which federal fire managers must forge new working relationships with other disciplines within the agencies, including those responsible for wildlife and fisheries and vegetation and watershed management.

Federal and state officials estimate that $30 billion will be needed over the next 10 years to implement the National Fire Plan. Toward this end, the Congress appropriated almost $2.9 billion for Wildland Fire Management for fiscal year 2001. At your request, we are reviewing whether the five federal land management agencies are spending this money in an efficient, effective, and timely manner. To date, we have focused our work primarily on efforts to reduce dangerous accumulations of hazardous fuels and firefighting management and preparedness.

In summary, the preliminary information we have gathered to date suggests the following:

- Human activities, especially the federal government's decades-old policy of suppressing all wildland fires, including naturally occurring ones, have resulted in dangerous accumulations of hazardous fuels on federal lands. As a result, conditions on 211 million acres, or almost one-third of all federal lands, continue to deteriorate. According to the federal wildland fire management policy, these conditions have increased the probability of large, intense wildland fires beyond any scale yet witnessed. Coupled with the explosive growth of people and structures in areas where human development meets or intermingles with undeveloped wildland—the wildland-urban interface—these fires will, in turn, increase the risk to communities, watersheds, ecosystems, and species. They will also place in jeopardy the lives of the public as well as the lives of the firefighters charged with controlling or suppressing them.
- The National Fire Plan represents the latest effort to address wildland fire on federal lands. Two conditions set this effort apart from prior efforts to reduce the risk of wildland fire: (1) congressional committee recognition of the need to sustain increased funding for wildland fire management in future fiscal years and (2) congressional committee direction to reduce the risk of wildland fire in the wildland-urban interface. However, although the federal wildland fire management policy is intended to provide the policy foundation for the National Fire Plan, many of the policy's guiding principles and recommendations—especially those that present challenges to traditional organizational structures—have not been implemented. Lacking the coordination, consistency, and agreement called for in the federal wildland fire management policy, the five federal land management agencies cannot ensure, among other things, that they (1) are allocating funds to the highest-risk communities and ecosystems, (2) will be adequately prepared to fight wildland fires in 2002, and (3) can account accurately for how they spend the funds and what they accomplish with them.
- The failure of the five federal land management agencies to incorporate into the National Fire Plan many of the federal wildland fire management policy's guiding principles and recommendations can be traced to their reluctance to change their traditional organizational structures of federal wildland fire management. As a result, the five agencies continue to plan and manage wildland fire management activities primarily on an agency-by-agency and unit-by-unit basis. Moreover, although implementing the National Fire Plan in an efficient, effective, and timely manner will require an interdisciplinary approach, federal fire managers and managers in other disciplines within the agencies—including those responsible for wildlife and fisheries and vegetation and watershed management—have been reluctant to forge the necessary new working relationships.

Conditions on Federal Lands Continue to Deteriorate

For a number of years, both the Congress and the administration have been made aware of the increasingly grave risk of wildland fire posed by the buildup of brush and other hazardous vegetation on federal lands. The 2001 update on federal wildland fire management policy emphasized the urgency of reintroducing fire onto federal lands.

The 1988 wildland fires that burned Yellowstone National Park and millions of acres of other public and private land resulted in a 1994 report by the statutorily established National Commission on Wildfire Disasters.[4] The Commission stated:

> "The vegetative conditions that have resulted from past management policies have created a fire environment so disaster-prone in many areas that it will periodically and tragically overwhelm our best efforts at fire prevention and suppression. The resulting loss of life and property, damage to natural resources, and enormous costs to the public treasury, are preventable. If the warning in this report is not heeded, and preventative actions are not aggressively pursued, the costs will, in our opinion, continue to escalate."

The Commission observed: "The question is no longer if policy-makers will face disastrous wildfires and their enormous costs, but when." The when came that very year. The 1994 fire season resulted in 34 fatalities, including 14 firefighters on Storm King Mountain in Colorado. These deaths, coupled with a growing recognition of the fire problems caused by the accumulation of hazardous fuels, resulted in the first comprehensive federal wildland fire management policy for the departments of the Interior and of Agriculture. The December 1995 policy stated:

> "The challenge of managing wildland fire in the United States is increasing in complexity and magnitude. Catastrophic wildfire now threatens millions of wildland acres, particularly where vegetation patterns have been altered by past land-use practices and a century of fire suppression. Serious and potentially permanent ecological deterioration is possible where fuel loads exceed historical conditions. Enormous public and private values are at high risk, and our nation's capability to respond to this threat is becoming overextended."

According to the 2001 update to the federal wildland fire management policy, conditions on federal lands have continued to deteriorate. In the aftermath of the escape of a prescribed fire at Cerro Grande, New Mexico, in May 2000, the Secretaries of the Interior and of Agriculture requested a review of the 1995 federal wildland fire management policy and its implementation. According to the 2001 update, as a result of excluding fire from federal lands, conditions on these lands continue to deteriorate. The update observed that the fire hazard situation is worse than previously understood and stated:

> "The task before us—reintroducing fire—is both urgent and enormous. Conditions on millions of acres of wildland increase the probability of large, intense fires beyond any scale yet witnessed. These severe fires will in turn increase the risk to humans, to property, and to the land upon which our social and economic well being is so intimately intertwined."

The 2001 policy update also observed that the fire hazard situation in the wildland-urban interface is more complex and extensive than was understood in 1995. According to the update, the explosive growth in the wildland-urban interface now puts entire communities and associated infrastructure, as well as the socioeconomic fabric that holds communities together, at risk from wildland fire. The update concluded that the fire problem in the wildland-urban interface would continue to escalate as people continue to move from urban to wildland areas in the twenty-first Century.

Implementation of the National Fire Plan Lacks the Coordination, Consistency, and Agreement Called for in the Federal Wildland Fire Management Policy

The National Fire Plan represents the latest effort to address wildland fire on federal lands. Two conditions set this effort apart from prior efforts to reduce the risk of wildland fire: (1) congressional committee recognition of the need to sustain increased funding for wildland fire management in future fiscal years and (2) congressional committee direction to reduce the risks of wildland fire in the wildland-urban interface. However, although the federal wildland fire management policy is intended to provide the policy foundation for the National Fire Plan, many of the policy's guiding principles and recommendations—especially those that present challenges to traditional organizational structures—have not been implemented. Lacking the coordination, consistency, and agreement called for in the federal wildland fire management policy, the five federal land management agencies cannot ensure, among other things, that they (1) are allocating funds to the highest-risk communities and ecosystems, (2) will be adequately prepared to fight wildland fires in

[4] Report of the National Commission on Wildfire Disasters (1994). The National Commission on Wildfire Disasters was established on May 9, 1990, by the Wildfire Disaster Recovery Act of 1989 (Pub. L. No. 101–286).

2002, and (3) can account accurately for how they spend the funds and what they accomplish with them.

Highest–Risk Communities Have Not Been Identified

The Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 2001 required the Secretaries of the Interior and of Agriculture, after consultation with state and local firefighting agencies, to publish jointly in the Federal Register a list of all urban-wildland interface communities, as defined by the Secretaries, within the vicinity of federal lands that are at high risk from wildfire, as defined by the Secretaries. Despite this directive, the five federal land management agencies currently do not know how many communities are at high risk of wildland fire, where they are located, or what it will cost to lower the risk. Therefore, they cannot set priorities for treatment or inform the Congress about how many will remain at high risk after appropriated funds are expended.

Here is what we have learned to date.

Prior to publishing an initial list of communities, the Secretaries of the Interior and of Agriculture did not define either "urban-wildland interface communities" or "within the vicinity of federal lands that are at high risk from wildfire." On January 4, 2001, the Secretaries published an initial list in the Federal Register of 4,395 communities. However, as stated in the notice, (1) 11 states did not respond or did not have lists of communities available, (2) 5 states indicated that they did not have any at-risk communities, and (3) each of the 34 states that did identify communities used "criteria it determined appropriate for selecting communities at risk."

In February 2001, Interior and the Forest Service issued guidance intended to refine and narrow the initial list of communities. The guidance defined wildland-urban interface. It also identified three criteria for evaluating the risk to wildland-urban interface communities (fire behavior potential; risk to social, cultural, and community resources; and fire protection capability) and risk factors relating to each criterion. In addition, the guidance included a discussion of fire behavior potential that provided some general information on identifying fire risk. However, the guidance did not specifically identify federal lands that are at high risk from wildland fire rendering it difficult to identify urban-wildland interface communities within the vicinity of such lands. Without this definition and with the criteria subject to broad interpretation by the states, the list of at-risk communities ballooned to over 22,000 in May 2001. In addition, two states with lands in the fire-prone interior West—California and Idaho—did not revise their initial lists of communities on the basis of the February guidance, stating that all of their communities on the initial list should be considered high-risk.

At that time, the Secretaries of the Interior and of Agriculture said they intended to continue to work collaboratively with states, tribes, local leaders, and other interested parties to identify and set priorities for specific treatment projects. However, rather than continue to work toward a jointly published list of communities, Interior and the Forest Service went their separate ways.

From the list of over 22,000 communities, Interior has identified 545 communities near its lands that it determined to be at "highest risk" by assigning numeric values to the risk factors in the February 2001 guidance. However, 278—or over half—of the communities are in three southeastern states—Georgia, North Carolina, and Tennessee—that are not prone to severe wildland fires. Conversely, since California and Idaho did not revise their initial lists of communities on the basis of the February guidance, Interior did not include any communities are in these two fire-prone states. (See app. I and II.)

Meanwhile, by October 2001, the Forest Service plans to develop its own separate list of highest-risk communities from the list of over 22,000. However, it plans to allow its nine regional offices to work individually with states within their boundaries to develop nine separate lists of highest-risk communities.

In the interim, a group of federal, state, and private individuals has prepared a draft 10-year strategy to implement the National Fire Plan.[5] This draft strategy emphasizes not only locally driven priority-setting but also locally driven budget development, project planning and implementation, monitoring, and reporting. However, without nationwide criteria to differentiate risks among wildland-urban interface communities in different states and geographical regions, the National Fire Plan will become little more than a funding source that will not allow for accountability at the national level and not ensure that federally appropriated funds are

[5]A Collaborative Approach for Reducing Wildfire Risks To Communities and the Environment: Ten–Year Comprehensive Strategy (Draft for Signature)(May 2001).

being spent in those wildland-urban interface communities at the highest risk of wildland fire.

Neither the Forest Service Nor Interior Is Fully Prepared to Fight Future Wildland Fires

The coordination, consistency, and agreement required by the federal wildland fire management policy is also missing from efforts by Interior and the Forest Service to ensure that the nation is fully prepared to fight future wildland fires.

For instance, the five federal land management agencies cannot agree on the priority to be given to preparing fire management plans. Since 1995, federal wildland fire management policy has required that every federally managed area with burnable vegetation must have an approved fire management plan. These plans are critical to determining preparedness needs for fighting wildland fires because they identify, among other things, which wildland fires should be suppressed and which should be allowed to burn. However, 6 years later, only the 60 units managed by the Bureau of Land Management have fully complied with the policy. Of the remaining 1,323 units managed by the other four federal land management agencies, 768—or 58 percent—still do not have a plan that complies with the policy. These 768 units encompass about 121 million acres—or 31 percent—of all the acres with burnable vegetation managed by the four agencies. (See app. III.) Moreover, although wildland fire does not recognize the administrative boundaries of federal land units, federal fire management plans have been, and continue to be, prepared on a unit-by-unit basis.

Similarly, rather than using one computer model to identify their fire-preparedness needs, the five federal land management agencies use three different models. The Forest Service, the Bureau of Land Management, and the Bureau of Indian Affairs use one model to determine their preparedness needs, the National Park Service uses another, and the Fish and Wildlife Service uses a third. Moreover, all three models appear to be inadequate for planning because they (1) do not consider conditions on non-federal lands in the wildland-urban interface and elsewhere, and (2) stop at the administrative boundaries of land units as opposed to providing the broader scale planning embraced in the federal wildland fire management policy.

Further, using existing fire preparedness models, all five of the federal land management agencies requested funds to hire, develop, and support additional fire managers and firefighters, and all five have made substantial progress in hiring the additional personnel. (See app. IV.) However, in addressing firefighting equipment needs, it is a different story. Even though the Congress gave the agencies the opportunity to request the equipment needed to be fully prepared to fight future wildland fires, the agencies did not identify their funding needs in a coordinated or consistent fashion. Instead, each agency identified its own equipment needs. Two of the agencies—the Forest Service and the Fish and Wildlife Service—did not request the funding needed to procure the firefighting equipment called for in their existing fire preparedness models. So for these two agencies it is not clear when they will reach the firefighting capacity envisioned with the funding provided for fiscal year 2001. The Forest Service failed to ask for about $44 million that it needs to procure hundreds of pieces of equipment, including fire engines, bulldozers, water tenders, and trucks, as well as associated supplies. According to the Fish and Wildlife Service, it was not aware that it was supposed to request about $8 million that it needs to procure about 90 pieces of firefighting equipment.

Lack of Coordination, Consistency, and Agreement Extends to How Accomplishments Are Measured and How Funds Are Accounted For

Lack of coordination, consistency, and agreement among the five federal land management agencies extends to how they plan to measure accomplishments and how they account for funds.

For instance, to ensure that the National Fire Plan accomplishes its intended goals and objectives, the federal wildland fire management policy requires federal agencies to establish and implement a clear, concise system of accountability. However, Interior has not established any quantifiable long-term or annual performance measures to gauge its progress in reducing hazardous fuels. Conversely, the Forest Service plans to measure and report on (1) the percent of wildland-urban interface areas with completed fuels treatments and (2) the percent of all acres with fuel levels meeting "condition class 1;" that is, where human activities have not significantly altered historical fire regimes or where management activities have successfully maintained or restored ecological integrity.

Similarly, Interior and the Forest Service are using different measures to gauge their progress toward being fully prepared to fight future wildland fires. Interior measures the percent of wildland fires contained during initial attack while the

Forest Service measures the amount of firefighting resources that it can make available to fight a wildland fire.

Interior and the Forest Service also do not consistently account for how they spend funds appropriated for wildland fire preparedness and suppression. Prior to fiscal year 2001, both Interior and the Forest Service personnel normally assigned to managerial, administrative, and other staff positions in their wildland fire management programs charged the first 8 hours of every workday to funds allocated for firefighting preparedness, even when they were assigned to fighting wildland fires. However, beginning with fiscal year 2001, all Forest Service personnel assigned to fighting wildland fires now charge their entire time to funds allocated for firefighting suppression. Although our ongoing work has not determined which is more appropriate, the Forest Service's accounting change will reduce funds charged to preparedness and increase funds charged to suppression, in comparison with prior years and Interior's accounting for its funds allocated for similar activities. As a result, the Congress has no consistent basis for holding Interior and the Forest Service accountable.

Effective Implementation of the National Fire Plan May Require Changes to Interior's and the Forest Service's Existing Organizational Structures

According to the 2001 update, the failure to fully implement the 1995 federal wildland fire management policy resulted, in part, from the lack of an entity with the authority to provide the necessary strategic direction, leadership, coordination, conflict resolution, and oversight and evaluation to the full range of affected agencies and disciplines. Although it is early in the implementation of the National Fire Plan, it is clear that its implementation also suffers from the lack of such an entity.

The five federal land management agencies have been reluctant to change their traditional organizational structures of federal wildland fire management. Because of this reluctance, they have failed to incorporate into the National Fire Plan many of the federal wildland fire management policy's guiding principles and recommendations. As a result, the five agencies continue to plan and manage wildland fire management activities primarily on an agency-by-agency and unit-by-unit basis. Moreover, although implementing the National Fire Plan in an efficient, effective, and timely manner will require an interdisciplinary approach, federal fire managers and managers in other disciplines within the agencies—including those responsible for wildlife and fisheries and vegetation and watershed management—have been reluctant to forge the necessary new working relationships.

From a budgetary perspective, this continuation of a narrowly focused, stovepipe approach will mean that funds appropriated for wildland fire management may not be used in an efficient, effective, and timely manner. There may be human consequences as well. For instance, the failure to allocate funds for fuels reduction to the highest-risk communities and ecosystems increases future risks not only to those communities and ecosystems, but also to firefighters charged with controlling and suppressing wildland fires.

We are continuing our review of the implementation of the National Fire Plan. However, we agree with the federal wildland fire management policy that the federal land management agencies must take action now to resolve the wildland-urban interface problem. We would encourage the administration and the Congress to consider all of the alternative organizational structures identified in the policy, including establishing a single federal wildland fire management entity with the authority to provide the necessary strategic direction, leadership, coordination, conflict resolution, and oversight and evaluation to the full range of affected agencies and disciplines.

Mr. Chairman, this concludes my formal statement. I will be pleased to respond to any questions that you or other Members of the Subcommittee may have.

Contacts and Acknowledgment

For future contacts regarding this statement, please contact Barry T. Hill on (202) 512–3841. Individuals making key contributions to this testimony were Ron Belak, Paul Bollea, Charlie Cotton, Alan Dominicci, Clif Fowler, Ches Joy, Paul Lacey, and John Murphy.

[Appendices attached to Mr. Hill's statement follow:]

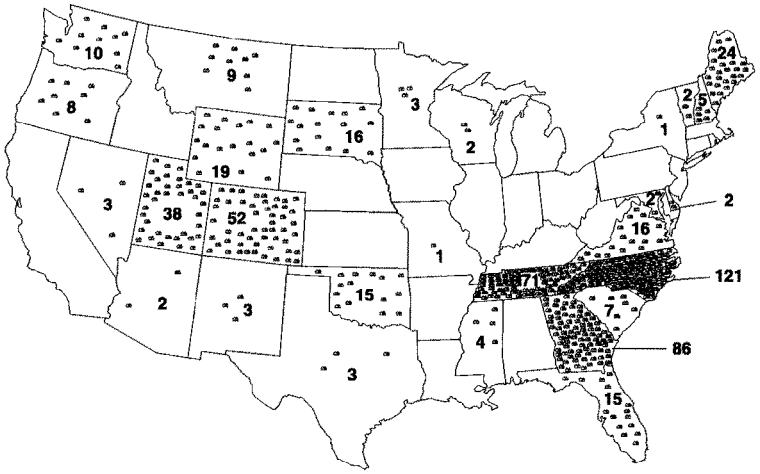
GAO
Accountability * Integrity * Reliability

Location of Major Fire Occurrences During Summer 2000

Note: Occurrences in Alaska and Hawaii not included.
Source: Adapted by GAO from U.S. Department of the Interior Data.

GAO
Accountability * Integrity * Reliability

Number of Communities, by State, Identified by Interior as Being at Highest Wildfire Risk



Note: No communities identified in California and Idaho because these states did not rank communities they submitted by high, medium or low risk. Communities in Alaska and Hawaii not shown.
Source: Adapted by GAO from U.S. Department of the Interior Data.

Appendix III

Status of Fire Management Plans, as of June 30, 2001

Agency	Units that need FMP	Units with a FMP	Percent of units with a FMP	FMPs not compliant with "1995" Fire Policy	Percent of FMPs not compliant	Burnable acres	Acres for units with a FMP	Acres for noncompliant FMPs	Percent
BIA	157	72	46	84	54	54,315,537	40,151,801	15,788,451	29
BLM	60	60	100	0	0	263,584,784	263,584,784	0	0
FWS	647	361	56	320	49	73,035,766	69,499,144	5,337,459	7
FS	242	219	90	137	57	181,175,021	165,812,295	74,845,727	41
NPS	277	147	53	227	82	82,532,896	77,939,127	24,756,455	30
Total	1,383	859	62	768	55.53	654,644,004	616,987,151	120,728,092	18.44

Legend:
BIA = Bureau of Indian Affairs
BLM = Bureau of Land Management
FWS =Fish & Wildlife Service
FS = Forest Service
NPS = National Park Service

Source: GAO's analysis of data from the Forest Service and Department of the Interior.

Appendix IV

Department of the Interior and Forest Service's Status of the Preparedness Staffing, as of June 30, 2001

	Temporary positions			Permanent positions*			All positions		
	2001 total projected positions	2001 positions actual	%	2001 total projected positions	2001 positions actual	%	2001 total projected positions	2001 positions actual	%
Department of the Interior									
Bureau of Land Management	1,731	1,409	81.4	1,895	1,412	74.5	3,626	2,821	77.8
Bureau of Indian Affairs	782	537	68.7	1,013	994	98.1	1,795	1,531	85.3
Fish and Wildlife Service	275	108	39.3	327	258	78.9	603	366	60.7
National Park Service	244	232	95.1	410	299	72.9	654	531	81.2
Total	**3,032**	**2,286**	75.4	**3,645**	**2,963**	81.3	**6,678**	**5,249**	78.6
Forest Service	5,591	5,483	98.1	5,416	5,267	97.2	11,007	10,750	97.7

* Permanent positions include both permanent and career seasonal positions.

Source: Bureau of Land Management; Forest Service

Mr. PETERSON. Due to the time problems, I am going to ask, Mr. Hill, and your people, could you hang around and we are going to try to hear from the other panel, Panel 3, and then what time we have left before a series of votes, we will do Q & A.

Mr. HILL. Sure.

Mr. PETERSON. We thank you very much.

Mr. PETERSON. If the other panel could quickly come to the table, and any members who want to write questions for the record, that would be appropriate.

I will introduce the next panel. We have Dr. Robert Lewis, Jr., Deputy Chief, Research and Development, USDA, Forest Service; and Dr. Ronald Haruto Wakimoto, Ph.D., Professor of Forestry, University of Montana School of Forestry.

STATEMENT OF ROBERT LEWIS, JR., PH.D., DEPUTY CHIEF, RESEARCH AND DEVELOPMENT, U.S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE; ACCOMPANIED BY KEVIN RYAN, PH.D., ROCKY MOUNTAIN RESEARCH STATION, U.S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE

Mr. LEWIS. Mr. Chairman, thank you for the opportunity to testify this day. I have with me Dr. Kevin Ryan from our Missoula, Montana, research lab. Also, I would like to enter my written statement into the record.

The purpose of our testimony today is to address the issue of science involved in the National Fire Plan and the implementation of that plan. Specifically, Mr. Chairman, we want to address the issue of fire ecology and the scientific basis for managing a fire-adapted ecosystem.

We have fire-based ecosystems, especially in the Western U.S.A. We also have the confounding problem of the wildland-urban interface, as mentioned here earlier. In other words, we have lots of people moving to where lots of trees exist.

Over the past 100 years, we have suppressed wildfires, and many of these areas and regions have accumulated masses of material that is combustible. Consequently, when we have fires today in many of these areas, they are catastrophic, causing tremendous damage not only to property and threatening human lives but also to the environment that we are destined to care for as stewards.

The role of science is to better inform policymakers and the fire managers in debates and to better prepare the citizens to live in a fire-adapted ecosystem.

Our role is to provide knowledge, analytical judgment, and also to pose the hard questions that must be addressed when we look at policy alternatives and options. Our goal is to integrate human and biological systems and to provide the scientific basis for developing a sound system of managing the ecosystem and managing these fires.

We have had significant changes in vegetation over the last 100 years. We have as a result of that major threats. If these highly flammable forests go down in flame and they are catastrophic, we have a number of impacts. One would be the loss of soil productivity and site stability. That is where we have tremendous soil erosion when we have these catastrophic fires and the soil becomes hydrophobic.

We have an increase in sedimentation, and streams of water are polluted and habitats are disturbed for fish, wildlife, and even plants. We have another problem in those denuded areas, and that is the threat of exotic weeds and invasive species, some native and non-native. We have an increase in the spread of those.

Consequently, we must address this problem. We are currently in a dilemma. We have a large number of acres that have not been managed actively over the last 100 years. What do we do with these threats? To sit back and do nothing is a threat within itself because human lives and even ecosystems are at threat. Therefore, we must develop and devise some method of dealing with this particular problem.

Consequently, science has—we have, in research not just within my agency, we have provided a sound scientific basis for the national plan that has been developed, and this plan will incorporate removing vegetation by thinning and prescribed burning. There are some stands that are, frankly, way overdrawn, and prescribed burning is not a solution within itself. Therefore, we have devised within our plan a combination of thinning and removal of vegetation, as well as prescribed burning where appropriate.

I might also point out that one solution does not fit all situations. Therefore, we must use the best science suitable for a particular region.

We have had an opportunity to observe incidents where science has been misquoted and misused. I believe it is inappropriate to disguise a political or policy debate and misuse science, and we have had examples of that, and I will just list a few of them.

One misconception is that the incidence of high-intensity fire is not unusual and is not indicative of systems that are uncharacteristically stressed. The fact of the matter is that the records indicate that we have had decades of fire suppression, and as a result, stands overstock and we have a problem.

Another misconception is that harvesting trees will increase the fire risk. In the early part of the last century, when more logging slash was left than is left today and we did not have the modern silvicultural processes, then this perhaps might have been the case. But modern silvicultural treatment allows us to harvest and treat and restore ecosystems in a very sound way.

I have a number of other examples such as that that I would like you to read in our written testimony, but basically I would like to conclude that we have a sound basis for the fire plan that we have developed, and research work that we currently are doing and work that we have done in the past are being used to implement this plan and to develop and refine it over time.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Lewis follows:]

Statement of Dr. Robert Lewis, Deputy Chief, Research and Development, Forest Service, U.S. Department of Agriculture

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Thank you for the opportunity to appear before you to talk about fire ecology and science and the National Fire Plan. I am Dr. Robert Lewis, Deputy Chief for Research and Development. With me today is one of our preeminent fire ecologists, Kevin Ryan, project leader in fire effects research at the Missoula Fire Laboratory of the Rocky Mountain Research Station. Dr. Ryan is available to discuss the scientific principles that govern fire-adapted systems.

I would first like to introduce the scientific basis for managing fire-adapted ecosystems and then describe the role of science and research in the National Fire Plan.

Fire Ecology and the Scientific Basis for Managing Fire–Adapted Ecosystems

Fire is a major force in shaping ecosystems. But fires can inflict great damage and suffering when they occur in environments heavily inhabited by humans and their structures. This inherent duality - ecological agent and destructive force - creates many dilemmas in fire policy formulation and management. These dilemmas have been exacerbated in recent years by the explosive population growth in the wildland urban interface and the rapid accumulation of vegetation.

To better inform policy and fire management debates and better prepare citizens to live in fire-adapted ecosystems, the science community provides knowledge and analytical judgment and asks hard questions about the consequences of management and policy alternatives. Science can describe the connections of integrated human/biophysical systems, more reliably forecast the occurrence of damaging fire events, and characterize the possible outcomes of policy and management options. Scientists can help managers interpret what they are seeing on the ground and can help design management programs as experiments to better understand how ecological systems operate and alert managers to changes that might be needed in management strategies.

Compared with preindustrial times, wildland fire incidence from 1930 through the 1970s decreased in response to aggressive fire suppression and land use changes. The unintended consequences of these changes have been a significant change in vegetation composition and structure - especially in ecosystems in the Interior West that are tuned to periodic fires at relatively short return intervals. This reduction in wildland fire has destabilized many forested ecosystems that depended on these periodic fires to keep stands thinned of competing underbrush and trees. Understory vegetation has become so dense that wild fires that do occur are larger and more severe than the historical fires. For some fire-adapted ecosystems, the frequency of severe fires has become abnormal, or as we scientists say, outside the range of historical variation.

The severity of these extreme fires poses threats to species persistence, watershed integrity, aesthetics, air quality, and community resilience. Extreme fire behavior can result in loss in soil productivity and site stability, increase sedimentation in streams and water supplies, degrade or destroy critical habitat for fish, wildlife, and plant species, including those at risk of extinction, and increase the spread of invasive weeds or non-native plants. Such fires also emit millions of tons of gases and particulate matter into the air, with negative consequences for human health, carbon balances, and the global climate.

The ecologically sound prescription for this situation is to return fire, on proper terms, to these fire-adapted ecosystems. But it is not simply a matter of letting wildfires burn, because many of these systems are already primed for severe and destructive fire behavior and are festooned with human structures and other values at risk. Frequent, controlled fires - prescribed burning - can be an antidote for sporadic, catastrophic fires. However, many of these systems have missed so many natural fire intervals and have become so encumbered with vegetative fuels that mechanical thinning may be necessary to safely restart natural fire processes. In some of the most overgrown conditions, prescribed burning without thinning could lead to catastrophic escape fires, illustrated vividly in the unfortunate case of the Cerro Grande prescribed fire escape last summer. Fire managers implementing the National Fire Plan are rapidly increasing the use of prescribed fire and thinning in scientifically based prescriptions to reduce fuel and protect multiple resources. These practices pose their own risks and controversies but when applied in scientifically designed fuels programs, they can be used effectively and safely. The alternative, that is no active management, involves all the resource and human losses associated with high intensity fires and the exorbitant costs of trying to suppress them.

Many policy questions surround the fire problem. These policy questions are heated, confusing, and often come disguised as science questions. We must remember that these questions are not solely scientific questions and that many non-scientific considerations—e.g., policy, law, and economics—must be part of the answer to these policy questions. While science can provide a more solid foundation for management decisions, science alone cannot answer these questions.

However, we realize that not everyone agrees that active management is warranted to reduce wildfire risk. In the context of debate about fire management and policy options, scientific understanding is sometimes misrepresented, oversimplified and taken out of context. This practice is unfortunate and detracts not only from

the quality of the deliberation about fire and land management strategies but also severely hampers the ability of agencies to build public confidence and trust needed to implement positive changes. We feel it is important to base policy and management choices on the body of knowledge, not statements or snippets lifted from reports to justify a point. It is the duty of the scientific community to be as clear as possible about what is known and not known about a body of science to put statements in their proper context, and to correct distortions and misrepresentations. This is extremely important in the field of fire ecology, the source of knowledge for strategies for fire-adapted ecosystems.

We acknowledge that we much to learn—or, as I will discuss later,—important knowledge gaps that we must attack. Some of these knowledge gaps relate to areas of identified misperception. Some, but certainly not all, of the more common misperceptions are:

A. That the incidence of high intensity fire is not unusual and is not indicative of systems that are uncharacteristically stressed. Records clearly show that the acreage burned is substantially higher in the last 10 years than in the previous seven decades. The number and intensity of extremely large fires has increased due to a combination of factors including fuels condition changes, climatic variation, initial attack, and suppression capability.

B. That harvesting trees exacerbates fire risk. In the early part of the last century when more logging slash was left than is left today, this was true. Modern harvesting operations, based on scientifically sound silvicultural prescriptions, use material more efficiently and follow up rapidly with burning or mechanical reduction of residues, the risk of fire is minimal. Thinning trees in conjunction with subsequent prescribed burning is an effective strategy for reducing fire risk.

C. That fires should be left to burn because fire is a natural part of the ecosystem. Forest Service and other agencies have wilderness and other areas where planning has deemed that fires can burn naturally and benefit the ecological and other objectives of the area. However, in much of the West, fuels have accumulated so much that fires left to burn can quickly become extreme events with a range of devastating consequences. We have initiated new research that will sharpen our ability to determine where relaxed suppression is appropriate and how wildland fires and prescribed burning can be used to achieve ecological and other objectives at the landscape level.

D. That mechanical removal of fuel is unnecessary and that prescribed burning alone can effectively reduce fuels. The Cohesive Strategy, based on a scientific analysis of the vegetative condition of the western forests, recommends that the most overgrown systems, having missed several fire cycles, will require mechanical thinning before any prescribed burning can be done safely. This strategy is the fuels management core of the National Fire Plan and is based on returning fire in its natural role to fire-adapted ecosystems. To build an even stronger scientific basis for strategy, we are researching ways to make fuels management prescriptions economically feasible and environmentally sensitive.

E. That we don't have to treat vegetation at the landscape or watershed level since we can protect homes through firesafe construction and home landscaping practices in the immediate interface. Our research has shown that fire safe practices are effective. However, this research did not negate the ecological and economic rationale for correcting problems at the landscape level. There are many reasons to minimize the frequency and impact of uncharacteristically intense fires including ecological values, aesthetic conditions, business and infrastructure, human health, quality of life and efficient use of taxpayer's dollars. Home protection and landscape health should fit together in an integrated protection strategy supported by scientific advances on all fronts.

Science and the National Fire Plan

Science plays a key role in the National Fire Plan. Each of the key points of the National Fire Plan have a science basis that has helped shape what is possible and what is sound. Forest Service Research and Development has sustained an active program of wildland fire research since the 1920's. It remains the world's premier organization in wildland fire science. We collaborate closely with research agencies, universities, and the private sector and work closely with fire management operations to refine research needs and ensure technology adoption. For example, firefighting procedures are based on findings from years of past and ongoing work in the fire behavior, meteorology, economics, operations research and engineering development. Rehabilitation and recovery methods are becoming more effective and efficient thanks to rigorous testing and environmental evaluation. Fuels reduction strategies have been developed and are being refined by scientific investigations at various scales to quantify the effects of removal and burning regimes on potential

fire behavior and a suite of ecological values and processes. These ongoing studies, in close collaboration with managers, are helping us understand how to plan fuels and vegetation treatment and enlighten us about the consequences of not taking active measures to manage fuels. They are showing us how to remove and use fuels materials we might otherwise burn and add to air quality problems. A growing body of social science shows us how to work with the public and the new fire science of structural ignition is showing us how to effectively protect homes in the interface.

It is a long-standing responsibility of Forest Service research to build the science base to protect forest ecosystems and to restore at risk systems to healthy conditions. We know that the science basis for some key questions is more complete than for others. We are working to fill these knowledge gaps and to help managers and the public think through problems with the best technical assistance and expertise. We know, for example, that many managers in recent fire seasons have observed dramatic reductions in fire spread and intensity as fires entered stands that have been thinned or previously burned. Scientific validation of these landscape scale phenomena is complex and involved, but we are working with managers closely to establish parameters for interpreting these events and setting up landscape scale experiments to help establish guidelines for future management.

We have many examples of successful collaboration between users and research that have resulted in science-based tools in common use such as:

- National Fire Danger Rating System
- Fire retardant technologies
- Fire Effects Prediction Systems
- Smoke Management Systems
- Fire Behavior Prediction Systems
- Fire Hazard Mapping and Fuel Models
- Fire Management Planning and Economic Analysis Systems
- Fire safety and health guidelines

We have parlayed this successful relationship into an intensified program of research and development made possible by the National Fire Plan funding. In fiscal year 2001, increased fire-related research and development in the Forest Service (including the Joint Fire Science Program) has been invested in 63 research and development work units. These units are already turning out useful products to support goals in each of the first four key points of the National Fire Plan.

In addition, the Joint Fire Science program, established by Congress in 1998, also supports the development of information and tools for fuels management. This interagency research and development program was funded at $ 16 million each with equal $8 million contributions from the Departments of Interior and Agriculture. The National Fire Plan doubled the size of the Joint Fire Science program in fiscal year 2001. There is an important complementary relationship between the Joint Fire Science program and the Forest Service research and development programs. The Joint Fire Science program does not employ scientists or manage other elements of scientific capability such as facilities, equipment, and support staff. The program focuses on applied research on issues that relate to fuels management, while the Forest Service research program provides scientific capability and focuses on long-term issues and fundamental science related to forest health, fire hazard, and the social and economic consequence of fire and other disturbances.

For fiscal year 2002 and beyond, the science base for The National Fire Plan and the Cohesive Strategy will attack important knowledge gaps. Top priority areas for research and development are:

Firefighting

- Tools to assist the integration of fire management with land management planning
- Improved predictions of fire behavior and fire season severity.
- Improved organizational effectiveness and safety practices

Rehabilitation and Recovery

- Improved effectiveness of rehabilitation (Emergency Stabilization and Rehabilitation) treatments
- Understanding of the effects of post fire treatments on wildlife
- Methods for reestablishing native species and excluding invasive exotic plants.

Hazardous Fuels Reduction

- Techniques for assessing and managing fire risk at landscape scales.
- Integrated silvicultural, processing, and marketing systems to economically reduce fire hazards.
- Testing the effectiveness and the environmental effects of different fuel treatments

Community Assistance

- Better understanding of public knowledge, beliefs, and attitudes about fire and fire management.
- Strategies for integrating fire and fuels management with sustainable community development.
- Strategies for reducing the vulnerability of homes and communities.

Summary

In summary, Mr. Chairman, the science community provides knowledge and analytical judgment to better inform policy and fire management debates and to better prepare citizens to live in fire-adapted ecosystems. In the context of debate about fire management and policy options, scientific understanding is sometimes misrepresented or oversimplified. It is the duty of the scientific community to be as clear as possible about what is known and not know about a body of science, to put statements in their proper context and to correct distortions and misrepresentations. Science plays a key role in the National Fire Plan. Each key point of the National Fire Plan has a science basis that has helped shape what is possible and what is sound. We are working to expand knowledge and to help managers and the public think through the problems with the best technical assistance and expertise.

This concludes my statement. Dr. Ryan and I would be happy to answer any questions you or members of the Subcommittee might have.

Mr. PETERSON. Thank you.

Mr. Wakimoto?

STATEMENT OF RONALD HARUTO WAKIMOTO, PH.D., PROFESSOR OF FORESTRY, UNIVERSITY OF MONTANA SCHOOL OF FORESTRY

Mr. WAKIMOTO. Chairman McInnis, distinguished members of the Subcommittee, it is a great privilege to have the opportunity to once again speak to this body. My opportunity to speak to Mrs. Chenoweth and Mr. Hill in Missoula last September was a memorable experience.

Way back in the 1950's and 1960's, the California Division of Forestry and the U.S. Forest Service supported studies that looked at fire weather and fuel conditions under "sheltered fuelbreaks." The term "sheltered" comes about by thinning of understory trees and shrubs and removal of larger trees to leave a widely spaced overstory. The term "fuelbreaks" simply means a strip or wide zone of modified fuels. Fuelbreaks, as opposed to fire breaks, cannot stop a fire unless suppression personnel are present and capable of suppressing the surface fire moving through the fuels on the ground. "Fire breaks" are narrow strips of bare mineral soil devoid of fuel.

These studies indicated that any tree manipulation deemed adequate to create conditions to stop a crown fire created conditions where the forest was hotter, it was drier, and it was windier than in the adjacent unmodified forest. You know, this is not rocket science. The spacing between the trees allows greater solar heating of the surface fuels, and the increased air movement dries these fuels near the ground. In short, the forest floor becomes more flammable. They are not fireproof.

So why do fire managers entertain thinning as a fuel treatment? They do so in the hopes that a crown fire will not be sustained when it reaches well-spaced trees. The reduction of the surface fuel decreases the convective energy going into the tree crowns, and the spacing of the trees limits the amount of radiation heat transfer to the adjacent trees. If these reductions are sufficient, the fire drops

to the surface. If this surface fire is low intensity, then the personnel have a chance to suppress that fire.

Simply thinning without surface fuel reduction will increase fire risk and potential fire behavior. Thin stands are not fireproof.

So we have the question of what degree of thinning is effective. I don't know the answer to this question given the variety of ecological conditions, fuel loadings, and forest structures that exist in the West. The best we can do is with empirical rules of thumb developed from observation. Observations last year in Montana indicated that pine stands with less than 20 feet between the crowns of the trees carried crown fires readily in Montana.

As I stated in September of 2000 in similar hearings, much of the land that burned in the Bitterroot National Forest in Montana last year was cut-over land, where the large, widely spaced Ponderosa pine had been harvested and a dense understory of Douglas fir released to grow. Nearly all the trees that burned last year had never seen a fire in their lifetime. So mortality was extremely high. Simply thinning such stands of fir will not solve our fire problem.

In addition, severe disease problems have occurred from such thinnings of Douglas fir where they are the climax species. In many areas of the West, plant succession and tree growth have progressed to a point that commercial thinning of these trees is probably the only way we will be able to reduce the fire hazard.

Now, I want to conclude by making this comment, that one of the key elements that I believe has been missing at times is looking at the role of fire on the landscape. We heard a panel before us from the agency talking about landscape-scale treatments. Well, I am not just talking about big treatments. I am talking about looking at the role of fire historically on the landscape, so we put the treatments in the right place.

When we have thinned large forested landscapes solely for fuel management purposes, they become almost a Maginot line where the likelihood of fire actually occurring adjacent to those thinned areas is almost zero. Many, many years ago during the CCC era, we built a 650-mile-long fuelbreak along the length of the Sierra Nevada Mountains in California. And you can't find that fuelbreak at this time. It is because we built such an area, we did it only for fire management purposes, not for silviculture or to grow trees, and the likelihood of a fire being against that fuelbreak was almost zero. And it was so important to us in our fire management that we could never maintain it and we never chose to maintain it.

I guess I will conclude my remarks there.

[The prepared statement of Mr. Wakimoto follows:]

Statement of Ronald H. Wakimoto, Professor, University of Montana, School of Forestry, Missoula, Montana

Chairman McInnis, distinguished members of the subcommittee, it is a great privilege to have the opportunity to once again present testimony to this body. My opportunity to speak to Mrs. Chenoweth–Hage and Mr. Hill in Missoula last September was a memorable experience.

I will not comment on the "Thirty Mile" Incident at this time. Many people have been speculating about fire experience, training and forest fuel conditions as causal factors without ever really examining the actual situation.

Way back in the 1950's and 1960's the California Division of Forestry and the U.S. Forest Service supported studies to look at fire weather and fuel conditions under "sheltered fuelbreaks." The term "sheltered" comes about by the thinning of

understory trees and shrubs and removal of larger trees to leave a widely spaced overstory. The term "fuelbreak" simply means a strip or wide zone of modified fuels. Fuelbreaks, as opposed to fire breaks, cannot stop a fire unless suppression personnel are present and capable of suppressing the surface fire moving through the fuels on the ground. "Fire breaks," are narrow strips of bare mineral soil devoid of fuel. These were often jeep roads bulldozed down the middle of fuelbreaks. The studies indicated that any tree manipulation deemed adequate to prevent the movement of crown fire across the fuelbreak created conditions that were hotter, drier and windier that the adjacent unmodified forest. This is not rocket science. The spacing between the trees allowed greater solar heating of the surface fuels, and the increased air movement dried these fuels near the ground.

Why do fire managers entertain thinning as a fuel treatment? They do so in hopes that a crown fire will not be sustained when it reaches well-spaced trees. The reduction of surface fuel decreases the convective energy heating of tree crowns and the spacing of the tree crowns limits the amount of radiation heat transfer to adjacent trees. If these reductions are sufficient, the fire drops to the surface. If this surface fire is low intensity, fire fighting personnel have a chance to suppress the fire. In other words, intensive surface fuel reduction must be combined with thinning and access for such treatments to be effective. Simply thinning without intensive surface fuel reduction will increase fire risk and potential fire behavior.

What degree of thinning is effective? I don't think we know the answer to this question given the variety of site conditions, fuel loadings and stand structures that exist in the West. The best we can do are empirical "rules of thumb" developed from observation. Thanks to long term, active research by the U.S. Forest Service experiment station, we have a good computer-based model of surface fire. Currently the development of a crown fire model to test the effectiveness of thinning is limited, but is being enhanced currently thanks to Congressional action providing funding for the Joint Fire Science Program.

Have we ever thinned large forested areas solely for fire management objectives before? How many of you have heard of the Ponderosa Way and Truck Trail? This was a 650-mile-long fuelbreak and road that spanned the length of the Sierra Nevada Mountain Range in California. This fuelbreak was constructed by the U.S. Forest Service using CCC labor during the Great Depression to do battle with the enemy of the forest, wildland fire. After the cheap labor force was gone it could not be maintained. It is now hardly visible on aerial photos. Once the trees are thinned, how can we afford to maintain such fuelbreaks? We have been there and done that! Such a strategy only makes sense if there are very high values-at-risk adjacent to the fuelbreak.

Comments I made in the September 16, 2000, hearings are worth repeating here. Much of the land burned on the Bitterroot National Forest in Montana last year was cut-over land, where the large widely spaced pines had been harvested and dense understory Douglas-fir released to grow. Nearly all the trees that burned last year had never seen a fire in their lifetime. Simply thinning such stands of fir will not solve the fire problem. Observations indicate that stands thinned to less than 20 feet between tree crowns carried crown fire readily. In addition, severe disease problems have occurred from such thinning in Douglas-fir where they are the climax species. Ponderosa pine must be restored to such sites. Where Ponderosa pine stands exist, thinning and removal of much of the Douglas-fir understory is desirable. In many areas of the West plant succession has progressed to such a point that the shade tolerant understory is too large in diameter to kill with prescribed fire. In such places, harvesting these trees is an ideal way to reduce fire hazard.

At higher elevations in forest that have historically had longer intervals between fires, the opportunity to mechanically thin is extremely limited due to lack of wind firmness. Such trees may have all originated from one major disturbance and need adjacent trees to help block the wind. Climax forests at higher elevations were seldom thinned by fire, so if they were to be thinned by harvest, disease problems may be enhanced by such actions as would blowdown. We may have to live with such low frequency/high intensity fire, while progressively thinning seral species stands adjacent to the urban/wildland interface.

It is significant to me that the four fire fighters who lost their lives in Washington State were working on a fire situated in a "roadless area". Hence the political posturing about fuel treatments and their effects on fire behavior and risk. Since 1964 and the passage of the Wilderness Act, the actions of Congress required two separate reviews and evaluations of roadless areas as candidates for wilderness status. Over 58 million acres of National Forest have "roadless" status. After seven administrations these lands remain in this status. Fire management is carried out to support the land management decisions that have been made. The people of this country have yet to choose, so I cannot support any actions in the name of fire

management that would bypass such an important choice by the American people. The vast majority of the acreage is non-commercial (low productivity) and remote. Thinning such forested land would destroy potential wilderness quality and enhance flammability. I also firmly believe that such actions would be an incredible waste of resources, especially when I consider the vast acreage of the wildland/urban interface that is already roaded and for which many land-use decisions have already been made.

Last year fire managers using well-conceived wilderness fire management plans combined with the federal wildland fire policy which allowed "wildland fire use," saved the U.S. taxpayers millions of dollars and preserved the naturalness and wildness of wilderness. Many lightning-caused wilderness fires were monitored rather than actively suppressed which allowed suppression personnel to defend lives and property along the wildland/urban interface. Rather that spending millions of dollars and risking many lives in suppression efforts, a natural process was allowed to operate as freely as possible in places set aside for naturalness. I urge that the implementation of the National Fire Plan include funding for the development of fire management plans specifically for roadless areas. Without such plans there can be no wildland fire use where lightning-caused fires may be allowed to burn. These areas have very low timber values and high public value.

Mr. PETERSON. We will start with the gentleman from Idaho, Mr. Otter.

Mr. OTTER. Thank you, Mr. Chairman.

Mr. Lewis, you heard the GAO's report, and I would assume that you have read—

Mr. PETERSON. Excuse me, could the gentleman pause just a moment? Would the GAO people come back to the table so you can get to a microphone? And questions will be for everybody.

Mr. OTTER. Perhaps we ought to get a wrestling ring here.

Mr. PETERSON. We have one.

[Laughter.]

Mr. PETERSON. I apologize.

Mr. OTTER. No problem. This didn't take off my time, I trust.

Mr. PETERSON. We will alter that. We are starting with 3 minutes.

Mr. OTTER. Let me begin again. Mr. Lewis, how long have you been with the Forest Service?

Mr. LEWIS. I have been with the Forest Service since January 1970.

Mr. OTTER. Of 1970?

Mr. LEWIS. Yes, sir.

Mr. OTTER. And so you have gone through quite a few administrations, then, haven't you?

Mr. LEWIS. I have gone through quite a few.

Mr. OTTER. And each administration has sort of a different attitude? Have they had demonstrably different attitudes on how they wanted the management and the process to take place in the management of the Forest Service?

Mr. LEWIS. Well, when I started out, I was down at Stoneville, Mississippi, as a technician, and so I have not been in the high-level research position but about 4 years. But I have been in management for about 10 to 15 years, and I see differences in administrations, and we work as career employees to serve that administration to our best ability. But I do see differences in them.

Mr. OTTER. So you have seen at least three administrations.

Mr. LEWIS. I have.

Mr. OTTER. And would you agree that it generally takes some time for them to hit the ground and get going? And do you think that amount of time has elapsed for the Bush administration?

Mr. LEWIS. I have worked in Washington, D.C. This is my second tour, and I realize that it takes time for a new team to come in. And that is just the way it is in management.

Mr. OTTER. So if I were to conclude that the GAO report that we have here today probably does indeed reflect the attitude of the past administration and not the present administration, would you agree or disagree with that?

Mr. LEWIS. That is a tough one for me to wade into. However, the National Fire Plan was initiated under the previous administration, and it is my assumption that the GAO used information that had been developed for quite a number of years.

Mr. OTTER. I don't want to use up all my time and pick on just you, Mr. Lewis, or subject just you to getting back to the office and getting summoned elsewhere. But it would seem to me that if this report does indeed reflect—this report doesn't reflect on the merits of the fire plan but on the lack of process to get going and lack of coordination.

Mr. LEWIS. Right, the—

Mr. OTTER. Would you agree with that?

Mr. LEWIS. Right. As I look at the report, the GAO report and the review period—and it covers a number of years, not just from January of this year until this present time—

Mr. OTTER. Thank you, Mr. Lewis.

Mr. Hill, where does this report end? How long did it take you to actually write up this report? Not do all the research and everything else, but when does this report end?

Mr. HILL. Well, the testimony we gave today is based on ongoing work that continues and will continue probably for—we have actually two ongoing jobs: one in the fuel reduction effort and one on the capacity issue, seeing how both of those efforts are being carried out. And we anticipate that both of those reports will probably be issued this fall.

Mr. OTTER. Yes, I understand that. But all I have in front of me today, including your testimony, is the substance of this report, is the ingredients right here in this report. And what I—maybe I ought to just ask you for your opinion. Do you expect—how long have you been with the GAO?

Mr. HILL. I have been with the GAO for 31 years.

Mr. OTTER. Well, then, you have seen a couple of administrations as well, haven't you?

Mr. HILL. Yes, I have.

Mr. OTTER. And don't you expect them to change from time to time in their manner and their focus and their value system?

Mr. HILL. They definitely change over time.

Mr. OTTER. And do you think that we have given this present administration enough time? Does this reflect the present administration's attitude or the past?

Mr. HILL. Let me just say it is not a matter of administrations. I mean, GAO's job is to basically document the present condition and to measure the present condition against what should be. And this, our testimony today, reflects the present condition. I think it

is fair to say that the new administration has just taken over. A lot of the policies and the plans were put in place by the last administration. It would be unfair to judge the new administration solely based on the work they have done to date. We have got to give them some time.

Mr. OTTER. In fact—

Mr. HILL. But may I also say that I have been around a long time in GAO, and on this particular issue, we have been watching this issue for many years. And as I said in my short statement, every time there is a disaster, every time there is a bad fire season, every time that firefighters get killed on the line fighting fires, there are commissions, there are task forces, there are groups that are put together to study what went wrong and to come up with solutions. And it is not a question that the solutions have not been identified. It is just a question of they have not been carried out and implemented. And it gets frustrating over the years.

Mr. OTTER. Well, trust me on this, Mr. Hill. It is my hope—in fact, my prayer—that this administration is going to be different.

Thank you, Mr. Chairman.

Mr. PETERSON. The gentleman from Indiana, Mr. Souder.

Mr. SOUDER. I don't have a lot of detailed questions, and obviously Indiana isn't one of your risk zones, and I haven't had a lot of experience with it . But I found some of the testimony a little confusing, and I want to ask some basic questions.

One is, it is unclear to me how your testimonies relate to the given situation as opposed to a hypothetically pure situation? In other words, allowing fires to burn might be fine were we not where we are today. But I heard through all the testimony some people were maintaining that, given the fact of where we are—I think the GAO study says that, given where we are, we have lots of highly flammable areas that could explode into major fires. I think Dr. Lewis' testimony says similar things, but your conclusions seem to be slightly different.

In other words, if there is accumulation of, quite frankly, Forest Service efforts to suppress fire over time—I grew up with Smokey the Bear suggesting that we shouldn't be having fires and doing everything possible to avoid any risk of fire, and I am sure that the reason this accumulation there is between political and Forest Service policies that have determined that we weren't going to have it. Now suddenly to reverse that, what I saw in one of the myths that Dr. Lewis listed was that somehow a radical change to that policy could also cause problems. Yet Mr. Hill seemed to be saying that we have this explosive problem that we have to deal with. Is there a difference between your proposals?

Mr. LEWIS. Okay. I will take the first cut at that. We are taking the position, based on what we know from research and anecdotal studies, that to sit back and do nothing and continue the practice of the last 80, 90 years and let the biomass continue to accumulate would be irresponsible. If we do nothing, we are putting these lands at risk.

Mr. SOUDER. It is suggested where you say that harvesting trees exacerbates fire risk is a myth, and that you also said a myth would be that fires should be left to burn because fire is a natural

part of the ecosystem. It suggests to me that you believe that there are alternative methods to just letting a fire burn to thinning out.

Mr. LEWIS. We believe that the active management involves both thinning and prescribed fire.

Mr. SOUDER. And would some of that thinning be commercial as well as just to practice thinning?

Mr. LEWIS. We have an objective in the thinning process, and that is, to restore forest health. Many of these stands are very unhealthy, and they are a threat and a risk to the various communities and also to ecosystems. There are ecological risks as well.

Mr. SOUDER. Is there any reason that that process couldn't also help pay for itself?

Mr. LEWIS. That is a policy call, and from my point of view, there is not any reason why.

Mr. SOUDER. Mr. Hill, do you agree with those statements or have any elaborations or disagreement?

Mr. HILL. Well, the problem you have is that the fuel has been allowed to build up over a 90-, 100-year period, and it has gotten to the point now where when fire is introduced into these high-risk forests, you don't have the natural burning process that cleans out the undergrowth. You have these catastrophic fires that just wipe out the whole forest. The whole effort that is being directed with the National Fire Plan is to focus on where these high-risk areas are, and particularly focusing in on wildlife-urban interfaces within these high-risk areas, and to go in there and remove or to thin some of this material that is accumulating in these high-risk areas so that when fire is introduced, it is introduced in a more natural way and it won't result in the entire forest burning.

So thinning is a tool that is used for that. Prescribed burns is a tool that is used for that. Harvesting could even be a tool that is used for that. It depends upon the forest we are dealing with. It depends upon the current condition that you are trying to deal with. So all these tools have to be used in a very thoughtful way, but, yes, they could be used to alleviate the problem.

Mr. SOUDER. Thank you.

Mr. PETERSON. In my hand here, I have one called Western Forest Health Initiative. This was in 1994. And then we have all been talking about the Federal Wildland Fire Management Plan of 1995. But, in fact, isn't it true that these were just studies that were done, recommendations that were done, and they were basically ignored? They weren't implemented.

Mr. HILL. They certainly weren't acted upon.

Mr. PETERSON. Well, I guess you would call that ignoring them, wouldn't you?

Mr. HILL. I don't know. Congress threw a lot of money at implementing them. They just weren't acted upon properly.

Mr. PETERSON. Well, I guess it has been my—I can say this, you can't. But it has been my observation that the last administration had a wilderness philosophy that all public land would be wilderness, if they could have their way, and it wouldn't be managed in any way. And your report here in 1995 talks about what will happen if that is allowed to happen, and it happened. The fires today were predicted year after year after year. And suddenly it came home to roost. Is that a fair assumption? Is that a fair assessment?

Mr. HILL. It is an accurate statement that the problem has been studied, certainly in 1994 and 1995, again in 2001, and that it has not been effectively dealt with. That is correct.

Mr. PETERSON. Mr. Lewis?

Mr. LEWIS. Yes, we have done a number of studies, some of them interagency, and I would like Dr. Ryan, if he would, if he has any statements on that.

Mr. RYAN. Yes, I would like to think sometimes research is actually in a role of leadership here. We have been doing fire research at the landscape level, across interagency boundaries, trying to understand where on the landscape you can accomplish the most amount of good with a fuels treatment, what should be the nature of that fuels treatment, first to mitigate the fire problem and then addressing what are the ecological implications of that type of treatment. So we have got, for example, a 15-million-acre area in southern Utah where we are looking at the entire landscape, using all the fire behavior and all the fire facts models to try to design where on that landscape—and that includes State lands, Park Service, Forest Service, BLM—trying to figure out where and how to design treatments on the landscape to have the maximum effectiveness for all the various resource values.

I think one of the points I would like to make is that if the agencies have been not as forthcoming in doing some of these things, it is because there is a science element that they don't really have all the guidance from science in order to be able to make the good decisions on where and how. And so that is part of our research effort, to come up with that type of a knowledge system in order to support this type of fuels treatment.

The ecology is a lot like politics. It is about place, and you have to integrate all of the interactions of that place and try to design a treatment for that place and for the intended purpose. And they are complex problems, and, you know, I think we are making some real headway in trying to come up with the tools for managers to use to turn the corner on some of these things.

Mr. PETERSON. So you could make the statement that in each region of the Forest Service it is a little bit different ball game. Is that fair?

Mr. RYAN. And within region.

Mr. PETERSON. And within region.

Mr. RYAN. As a matter of fact, if you look at a lot of our country, I wouldn't prescribe the same treatment on the north side of the same mountain as I would on the south side, because the historical range variation that that site developed with and its fire relationships are different. You have to recognize those differences with any treatment that you prescribe.

Mr. PETERSON. But the treatments we prescribe today with the potential of lawsuits, it is sometimes pretty hard to get to the finish line. Has that been a problem?

Mr. RYAN. That is not a science problem. That is a policy problem.

Mr. PETERSON. It is not policy. It is a process problem. We have so allowed individual lawsuits that any one person that disagrees with all of your science can stop it, with not spending a dollar. Is that a fair assessment? I mean, that is how I see it today. The law-

suits in my forest areas are by individuals, usually very young, usually college age, quite often by free lawyers, donated from universities that work pro bono—until they win, then they get paid. So there is no cost investment, and they just take their philosophical views and by issuing a lawsuit can stop the process that you are talking about of adequately thinning so you could go back to prescribed burn.

Mr. COTTON. May I take—

Mr. PETERSON. Sure, take a shot at it. I have been waiting to hear from you.

Mr. COTTON. It is true that wherever you are going to propose to thin a forest before you do a prescribed burn, you are going to get appealed and you are likely going to get litigated. What I think Dr. Ryan is pointing out is the fact that if they in the national forest system applied the landscape-scale type approach that he is applying in research, then they would have a better scientific basis on which to defend their actions. But right now, I am not sure when Dr. Ryan's study is going to be completed or when it is going to be transferred and applied in the regions and in the forests. In the meantime, they are still planning, they are still budgeting, and they are still implementing on a unit-by-unit basis. And if they keep doing that, they are going to keep getting sued and they have got a darn good chance of losing.

Mr. LEWIS. Even when we have the best available science, we cannot guarantee that we will not get litigation. But through applying the best available science, we have a much better chance of winning and making our point. And in science, our role is to provide credible, objective information to the policymakers and to not advocate on a political view or a policy view or an environmental or non-environmental view, but state the facts as they are and deal with reality.

Mr. PETERSON. I like that, and I like many of your statements. But I guess the part from my background in Government, I don't know of any other area of Government where lawsuits have become the way we operate. It is the ability for any one person to stop anything. And if we did that in health care—and we are having a little bit of a debate about health care right now that talks about lawsuits. But if lawsuits determined what health care was going to move forward, what procedures were going to be standard, what was going to be the best medical practice to treat our cancers and our problems, we would all be dying.

I think the root cause of many of our problems is this ability of any one person to stop 10 years of research from being implemented and the 4 or 5 years of debate in the Departments that are hired to manage our forests, all of their best policies are debated, and then one individual can have a lawsuit and stop it all dead in its tracks.

In my view, the 1995 plan was not implemented. The 1994 plan was not implemented. And now we last year saw the record number of fires and the greatest amount of damage anybody could have ever dreamed of, I guess. We have another high-fire season going already. But if we don't have the ability to implement, we are just going to continue to burn.

Mr. COTTON. Mr. Peterson, lawsuits didn't stop the implementation of any of those plans. What stopped the implementation of those plans was the failure of these agencies to work effectively together.

Mr. PETERSON. So you think—you are back to that issue that the agencies' not working together is still one of the biggest detriments?

Mr. COTTON. If they did a good job of identifying where the highest-risk communities are, where the Federal lands that face the highest risk of catastrophic wildfire are, and develop land-based or land-scale approaches to reducing those fuels, just as Dr. Lewis said, yes, you are going to get appealed and, yes, you are going to get litigated, but you will have the scientific credibility to win.

Mr. PETERSON. But is it fair to say that—I am going to give you a shot. Is it fair to say that agencies who don't like to get sued and don't like to lose are hesitating to make the right decisions because if the treatment has anything to do with cutting down trees, they are going to get sued?

Mr. COTTON. I don't think that they are not going to implement a project simply because of a threat of a lawsuit, especially in the fact with the direction that the Congress has given them in identifying the highest priority areas. And I feel uncomfortable sitting here with scientists talking about science, but they are always going to be dealing with a certain level of scientific uncertainty. And that is where adaptive management comes in, where a good monitoring and evaluation component says what did we set out to do, what have we accomplished, and if we didn't accomplish what we set out to do, what do we need to change. And right now that is a component that is not part of many of these projects. There is no money there for monitoring, there is no money there for evaluation, and there is no money there to address scientific uncertainty.

Mr. LEWIS. Yes, I think that the agencies are working together in a number of areas, and we have a brand new Chief, Dale Bosworth, and I know him—he is not here, and I can say this. I am not buttering up to the boss. But he—

Mr. PETERSON. Sure you are.

[Laughter.]

Mr. LEWIS. Right. He is definitely committed to working across departments in Government, and I know that for a fact. We also have the Joint Fire Sciences Program. It is an interagency science program where we are aiming at getting the best available science. And you are right, adaptive management is a very important part of this.

Science will always uncover new evidence, new ways of doing thing. Mr. Chairman, just as you pointed out about treatment of cancer, as we get new treatments and FDA approves them, we implement them. And that is what we are doing here. And we think—I would like to look at science as having the role of helping policymakers create new and better visions, and also we have the role of helping them achieve their goals and aspirations. And we plan to work as hard as we can to help make this a success.

Mr. PETERSON. Well, I share your hope, because I do think this administration is going to try. But with the ability to sue that is there, it is going to be very difficult.

Mr. Udall, I think you have a question. You are recognized.

Mr. UDALL OF COLORADO. Thank you, Mr. Chairman. I want to also welcome the panel and thank you for your time today.

I did want to address some comment that Mr. Peterson made about wilderness areas having somehow created the problem of wildfire in the West. The wilderness areas take up quite a small percentage of public lands in the West, and if I am correct, the GAO did a study that suggested—and I would like to see if we can include it in the record—that, in fact, we are more at risk of wildfire on lands that have been in some way or another manipulated by human beings and human activity, for all the positive things that occur from those activities, than wilderness lands which have been left alone in many ways. I think that is an important thing to look at. That is not, again, to say that some wilderness areas haven't been prone to wildfires that have been intense and caused problems. But most of the fires that have occurred, from my understanding, have been in these areas where we have logged, where we have had human impacts occur.

I will leave that for the response from the panel, if I could, for some written questions. But I did want to move to the GAO report. On page 12 of the report, the report says, "We agree that the Federal land management agencies must take action now to resolve the wildland-urban interface problem." Are you saying—and, Mr. Hill, I would direct this to you—that greater emphasis should be put on our fuel reduction work in the interface area?

Mr. HILL. I think that was congressionally directed when the money was appropriated to implement the National Fire Plan, and we would agree that that is the high-risk area. That is the area where you have people who are moving in and houses and structures that need to be protected, and certainly the wildland-urban interface areas that are located in the high-risk areas are the areas that should be targeted, and quite appropriately, Congress directed the agencies to target their efforts.

Mr. UDALL OF COLORADO. If I could, that leads to another part of the report, and if I could quote it: "Despite this directive"—the directive to the Secretaries is implied in that phrase—"the five Federal land management agencies currently do not know how many communities are at high risk of wildland fire, where they are located, or what it will cost to lower the risk. Therefore, they cannot set priorities for treatment or inform the Congress about how many will remain at high risk after the appropriated funds are expended."

Your maps in the context of that comment raise a question. Does the greater number of Southern and Eastern communities at risk reflect population densities or some other factor rather than the extent of fire risks?

Mr. COTTON. Mr. Udall, they reflect some other factors, mainly the fact that neither Interior nor the Forest Service developed any criteria to define an interface community facing high risk in the vicinity of Federal lands. And it is very important in the Southeast that many of those lands are Category 1 lands, meaning that they have a low risk of catastrophic or severe wildfire, because they have been treated on a fairly regular basis. But the new money that the Congress gave those agencies this year was to treat the

other communities that are facing the higher risks, that are in the Category 2 and Category 3 lands. So it was absolutely imperative for these agencies to identify those lands, identify the communities, and treat them. And they haven't.

Mr. UDALL OF COLORADO. Are those areas mostly in the West, would you say?

Mr. COTTON. They are virtually all in the interior West.

Mr. UDALL OF COLORADO. I think that lends further credibility to your concerns, and strength, not that you are lacking for credibility—to strengthen your point of view that we need to create a situation where the agencies can cooperate more effectively.

Mr. COTTON. To do things like define "interface."

Mr. UDALL OF COLORADO. Yes.

One of the questions that I was left without being fully answered with the last panel—and it was more a function of time than, I think, intent on the part of the people who testified—was this comment that it is more expensive to treat in the urban-wildland interface. It seemed counterintuitive to me that you have access in those areas, roads, power supplies, citizens who know those areas, and that it would be easier to get in and treat those areas.

Would you comment on the expense to treat the urban-wildlife interface?

Mr. COTTON. The expense is primarily the fact that you have to do mechanical thinning before you can burn, because if you don't and the fire gets away, then it will be catastrophic to those communities, to those residents, to those people.

Mr. UDALL OF COLORADO. So if I could clarify, you are suggesting that in those areas you first have to thin, then you can introduce fire. In other areas, where you have lesser risks, say, you can take maybe a little bit more of a chance to put fire back into the landscape initially and then control it if, in fact, you have a problem.

Mr. COTTON. That is correct. You can do a prescribed burn.

Mr. UDALL OF COLORADO. I think that is one of the important things that this Committee, I think, understands but needs to remember, is that it sounds great to return fire into these landscapes. We all now have undergone, I think, a sea change, if I am not mixing metaphors, in our understanding of the important role that fire plays. But you can't just throw it into the landscape because we have so much fuel that you are going to get a crown fire or fires that run out of control. So you first have to thin; then you can bring fire back and hopefully our forests will return to a more natural condition.

Mr. COTTON. That is correct.

Mr. UDALL OF COLORADO. Mr. Chairman, I thank you for your indulgence, and I would also ask unanimous consent to direct some additional written questions to the panelists.

Mr. PETERSON. A quick comment from Mr. Souder.

Mr. SOUDER. I wanted to make sure the record reflects that the map that was shown earlier, if it is printed in the record as it was shown earlier, it almost has a reverse correlation to what you have been saying is the highest risk. In other words, where the communities, because they were self-identified without clear criteria by the States, that, in fact, what this chart shows are cities at risk;

when you match it with the fire, it is almost, with the exception of Colorado and Utah, an inverse correlation.

Mr. COTTON. That is correct.

Mr. SOUDER. And so this has to be taken very lightly, if anybody looks at this and says these communities are at risk, because it has got to be overlaid with this map.

Mr. COTTON. I certainly wouldn't fund them.

Mr. SOUDER. Thank you.

Mr. PETERSON. I thank the gentleman.

I would like to thank the panel. I think the dilemma that we sense here today is that we have had a multitude of plans that have not been implemented. We all have high hopes that this administration is going to get the departments working together and get a comprehensive plan. But we just talked about the areas of highest fire potential. You are going to have to do mechanical thinning before you do prescribed burn, and I am going to tell you, when you do mechanical thinning, you are going to get lawsuits and it is not going to happen. And somehow we have got to get by that issue, but I would like one quick comment from Mr. Hill.

Your report says that this problem is worse than we think it is. Is that an accurate assessment?

Mr. HILL. I think that was contained in the policy update, if I recall. We took that language directly out of Interior and Agriculture's own policy update. The assessment of the group of individuals that put that policy together basically said that the situation is worse than ever.

Mr. PETERSON. Well, last year we burnt 7 million acres. I hope sanity comes to us and we somehow get our act together and get beyond this.

Thank you all very much for a very interesting discussion and for sharing candidly today.

This hearing is adjourned.

[Whereupon, at 5:35 p.m., the Subcommittee was adjourned.]

[A statement submitted for the record by John Sexton, President, Ecoenergy Systems, Inc., follows:]

ECOENERGY SYSTEMS INC.
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We have been requesting assistance to have Pyrocool used for the 2001 wildland fire season. The Federal Acquisition Regulations as well as a number of Executive Orders and in particular Executive Order 13101 mandate that the Federal Government purchase environmentally preferable products. Executive Order 13101 requests Executive Agencies to immediately test and evaluate the principals and concepts of environmentally preferable purchasing through pilot programs. By virtue of its **Presidential Green Chemistry Challenge Award**, Pyrocool is an environmentally preferable product, and this will be even more apparent as you read on.

The US Department of Agriculture's (USDA) Departmental Manual titled "ENVIRONMENTAL POLLUTION, PREVENTION, CONTROL, AND ABATEMENT MANUAL" applies to all USDA Agencies and cites 9 E.O.'s including 13101. The objective is "to implement all programs so as to minimize adverse impacts on the quality of the environment". Included in the ways the USDA will accomplish this objective is to "procure and use material and energy resources in a manner that minimizes the use of hazardous and toxic substances, prevents pollution, reduces generation of hazardous and nonhazardous waste".

The US Forest Service (USFS) has advised us that because of an internal USFS policy, they cannot comply with the law or the Executive Orders or apparently, their own Agency Manual as it relates to the acquisition of environmentally preferable products, because the USFS's policy is to only use products that have been tested and are on the USFS Qualified Product List (QPL). Federal Acquisition Regulations and the Executive Orders do not require a product to complete testing to be considered environmentally preferable. In fact, the USEPA developed 5 guiding principles to be used by Agency executives to determine if one product is environmentally preferable over another. Agency executives are instructed to use common sense and available information, including environmental labelling, to establish if a product is environmentally preferable. In addition to having toxicity and corrosion test results from USEPA accredited laboratories, Pyrocool has the highest environmental labelling a product can have - the Presidential Green Chemistry Challenge Award.

The USFS has a number of chemicals on their QPL that contain hazardous ingredients including **foams that have hazardous materials** listed on their Material Safety Data Sheets (MSDS). One of the foams on the QPL states on their MSDS sheet, Section 15. "All components of this product are listed in the Toxic Substances Control Act Inventory". In addition to hazardous foams, some of the **retardants used in airdrops contain sodium ferrocyanide**. According to information on government web sites, **long exposure to low levels of cyanide may result in breathing difficulties, heart pains, vomiting, headaches and enlargement of the thyroid gland**. Also, at high concentrations, cyanide becomes toxic to soil microorganisms and can pass through soil into underground water. These retardants are responsible for fish and amphibian kill every year. In addition, when exposed to heat (wildland fires) **sodium ferrocyanide** forms cyanide gas, which is deadly.

According to a letter sent last year from Rep. Tom Udall of New Mexico to the USFS, **cyanide in storm runoff was found to be 5 times the permissible level** following the retardants use on wildland fires in New Mexico. Last year over **35 million gallons of cyanide laced water was dropped on Western States**. The Governor of Montana recently testified that she expects a fire season at least as bad as last years, and this may be the same for the rest of the Western States.

Pyrocool has started the USFS approval process, but it will take many months (18 to 24) for the USFS to complete the tests. The USFS's has advised us that "it is a long-standing policy that all fire fighting chemicals applied to national forest land must go through rigorous health, safety, environmental, and effectiveness testing for fire fighters, the public, and the land". If the current "rigorous" standards allow for chemicals that have hazardous ingredients listed on their MSDS sheets, and if they allow for chemicals that contain cyanide, we would suggest that one can reasonable conclude that Pyrocool, which has no hazardous ingredients on its MSDS sheet and won the Presidential Green Chemistry Challenge Award provides a level of health, safety and environmental protection for fire fighters, the public and the land that is not currently enjoyed with the main wildland fire fighting chemicals on the USFS Qualified Product List.

In addition to being environmentally responsible, Pyrocool is very effective on wildland fires. It has been used to high praises in Montana, Florida, and Idaho as well as the Czech Republic, South Africa, Canada and Australia. Interestingly, Australia relied on Pyrocool's Presidential Green Chemistry Award when they decided to use Pyrocool. They continued to use Pyrocool because of performance. Unlike most fire extinguishing chemicals which require continuing mop up because of rekindle, Pyrocool removes the heat from the fire and fire fighters report that the fires go out as quickly as the Pyrocool is applied and there is no rekindle. Pyrocool is so effective because it is an industrial extinguishing agent. Pyrocool has extinguished a 98,000 ton oil tanker in 12 1/2 minutes when the experts said it would take at least 10 days. In the Czech Republic, the **number of operational flights needed to extinguish wildland fires has been reduced by 66%** since they started using Pyrocool. Fire fighters in Idaho reported that **Pyrocool was the best foam they ever used and they put out more fire using less water when using Pyrocool.** They also reported that Pyrocool did not clog their proportioners, no one got skin rashes, there was no odor, and Pyrocool did not discolor the paint on the trucks.

We have detailed the type of chemicals that can pass the "rigorous" testing, we would also like to put the time period needed to carry out the "rigorous" testing for foams in perspective:

1. There are four toxicity tests that must be done. These tests are done to a nationally recognized standard. Three take 2 weeks, and one takes three weeks.
2. There is a stability test that must be done. If done to UL standards it can be done in two weeks. The USFS puts several 5 gallon pails of the product to be tested outside for 12 months and then checks it. In other words, using current nationally recognized scientific testing, 50 weeks of testing can be saved.
3. There are corrosion tests that are conducted on several different metals. These are not done to a nationally recognized standard, but are done to a standard set by the USFS. The opinion of a number of USEPA accredited labs, is that, because these tests are not done to a recognized standard, they cannot be duplicated. These corrosion tests take 90 days.

Because all of the tests can be done concurrently, the entire approval process can be shortened by approximately 1 to 1 1/2 years if current scientific testing methods were used.

When the 1995 Federal Wildland Fire Management Policy was revised in 2001, there were 9 guiding principles. Several of these directly relate to products like Pyrocool when looked at in a broad scope.

Guiding Principle 1. "Firefighters and public safety is the first priority in every fire management activity." We agree that wildland fire fighting is difficult and dangerous. We do not know why safety does not include a review of the hazardous chemicals that firefighters are exposed to on a regular basis. In press accounts, the USFS has said that they have no choice but to use these chemicals because it is an emergency situation. Firefighters are told the products being used are safe, and usually they are told this because these products are not reportable under SARA 313. From our experience, the fire fighters are not told that there are hazardous ingredients listed on the MSDS sheet. In the past, it may have been necessary to use hazardous chemicals, but it is no longer true. Safe chemicals, and there are others besides Pyrocool, are available.

Guiding Principle 3. "Fire management plans, programs, and activities support land and resource management plans and their implementation." We do not believe that any plan, program or activity that exposes resources to hazardous chemicals is justifiable when there are economic alternatives using environmentally responsible chemicals.

Guiding Principle 6. "Fire management plans and activities are based upon the best available science". We have already documented the process, and the time that could be saved if the best available science was used.

Guiding Principle 7. "Fire management plans and activities incorporate public health and environmental quality considerations". We have documented what types of chemicals are currently used. This has an impact on the public health and environmental quality. Because there does not seem to be any long term studies of what these chemicals do to human health and the environment, there is no way to quantify this impact. We can only note, that, since the hazardous chemicals are required to be shown on a product's MSDS sheet, there must be some health risk.

We can document all of the above. We should no longer have to have fire fighters, citizens, and natural resources exposed to dangerous chemicals. **Pyrocool is cost competitive with the hazardous chemicals being used on a per gallon basis, but if you look at the total cost of use (chemical's cost, potential human health effects, damage to the environment, equipment maintenance, etc), Pyrocool is a bargain.**

Respectfully Submitted,

John Sexton
President